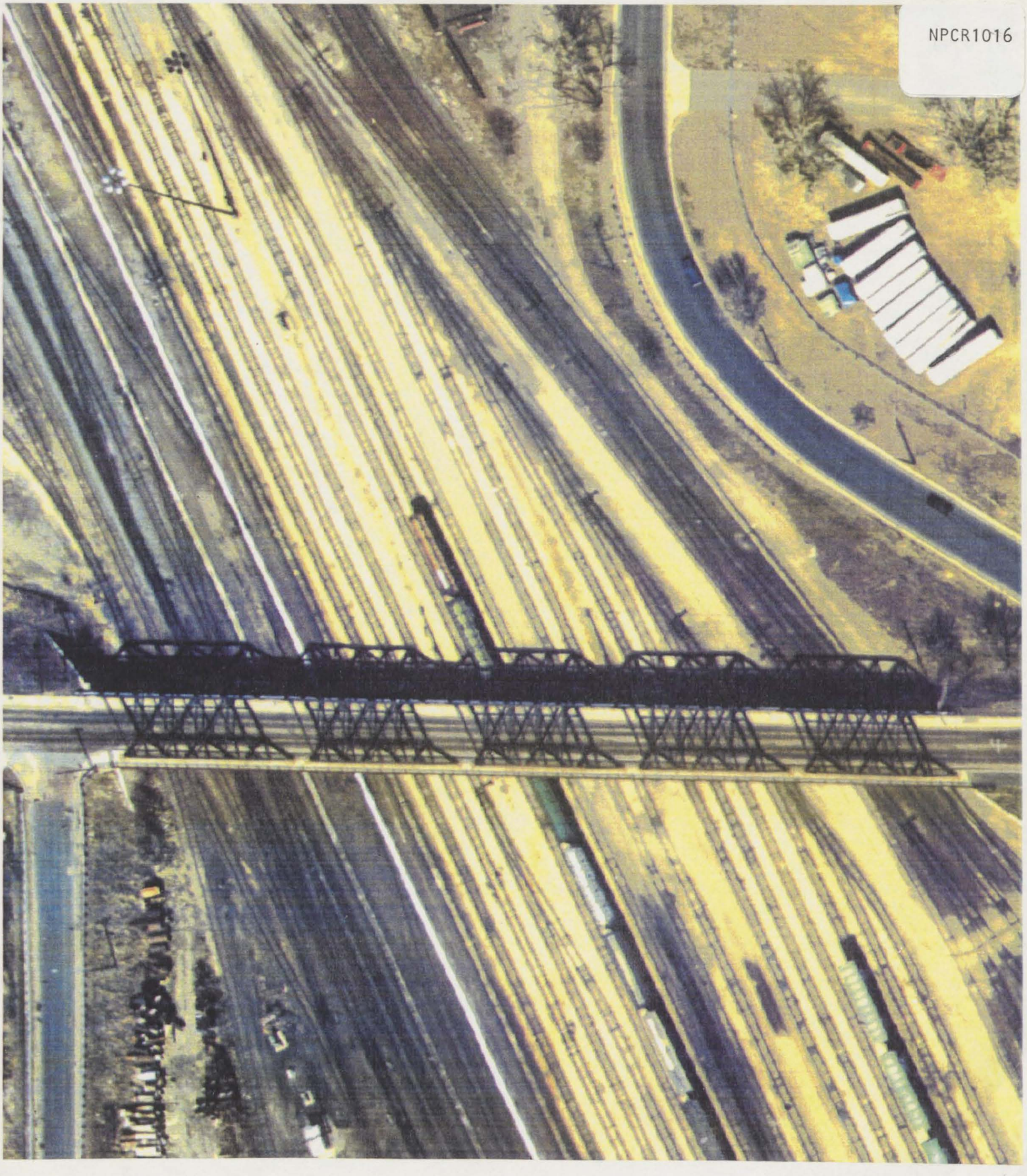

Columbia Park Environmental Profile

By Scott E. Ek

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Neighborhood Planning for Community Revitalization

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Acknowledgments

I would like to first thank Lotte Melman and the residents of the Columbia Park Neighborhood for giving me the chance to work on such an important project. I would also like to thank Lisa Doerr at Citizens for a Better Environment for her help and expertise and for getting me started and showing me how to find what I was looking for. I would like to thank all of the people at the following organizations for their help, encouragement, and patience: Minnesota Pollution Control Agency (Air Quality, Hazardous Waste, Property Transfer, Water Permits, Environmental Analysis, Petrofund, and Superfund), Minnesota Dept. of Agriculture (Superfund Program), Emergency Response Commission, Metropolitan Council Wastewater Services, Hennepin County Dept. of Environmental Management, Minneapolis Public Works Dept., and the Minneapolis Park Board. I would finally like to thank Kris Nelson at Neighborhood Planning for Community Revitalization (NPCR) for the opportunity and The Center for Urban and Regional Affairs (CURA) for use of their computers and facilities.

I. Introduction

The Columbia Park Neighborhood is located in Northeast Minneapolis. This area of Minneapolis is where the city industry is located. The residential area in the neighborhood is relatively small, and industry plays a major role.

This Environmental Profile provides the residents and industry of the Columbia Park Neighborhood with an in-depth examination of the neighborhood's industries and how these industries impact the surrounding environment. The information in the profile is laid out in a series of tables and text.

There are fourteen facilities within the neighborhood that are regulated by permit or license for one or more type of pollutant. Most of this regulation is not designed to prevent pollution, but to permit pollution at certain regulated levels. In addition, the profile also identifies all superfund and petrofund sites and includes a summary of professor Pfannkuch's 1986 Study of Lake Sandy.

This profile is designed to give the citizens of Columbia Park a better understanding of what it means to be a regulated polluter. The citizens can then work together with the appropriate agencies and industries to reduce the amount of waste generated and disposed of. All of which does have an effect on the environment.

II. Guide to Profile

All of the information collected is presented separately for each specific industry or designated area. The information contained in the profile is from many different agencies and is available to the public. This profile brings all that information together into one convenient report. A listing of the federal, state, and local agencies where more data is available is located in the back (Appendix F).

A. Resources

Waterbodies:
Mississippi river
Former Lake Sandy
10 Seasonally FloodedWetlands

Parks:
Columbia Park and Golf Course
Hi-View Park
Architect Triangle
St. Anthony Parkway/Mississippi river parkway

B. Infrastructure

Railways:
Located in the Columbia Park Neighborhood are extensive track systems, switching yards, and engine repair facilities. The only railway facility is the Soo Line Shoreham Yard Shop. This facility is located in the south east corner of the neighborhood and serves as an intermodal facility and an engine repair shop. Also located in the neighborhood are sections of track which are owned and used by the Wisconsin Central Railroad and Burlington Northern Railroad. These last two railroads do not have shops/yards in the neighborhood.

C. Industries

Each facility listed in this profile will have different tables and information due to the different type of regulations and/or lack of regulation.

Business Profiles
This section compiles data about the businesses manufacturing process (SIC code), establishment, ownership, parent company, number of employees, and annual sales. This information is designed to create a clearer picture of the various industries. Information for this section was taken from the following resources:
Minnesota Directory of Manufacturers
Minnesota Manufacturers Registry
Corporation Report Fact Book
COPR Database - LUMINA, Wilson Library, University of Minnesota

Environmental Regulation
Neighborhood industries were tracked for air, water, sewer, and hazardous waste permits. The permit for each industry can be found at the appropriate regulatory agency. Permit files contain permit applications and corresponding parameters, inspection records, correspondence, citizen complaints, and enforcement activity or notices of violation.

Every business in Columbia Park is located in a table on page 20. However, not all of them are under environmental laws. This table lists all the permits that each facility has. Not all businesses have a permit in every category. The tables may differ for each facility due to the different parameters set out in the permits. All the permits have an issue date, expiration date, regulation parameters, reporting requirements, and some type of enforcement activity. Also included in some of the permits are the pollution/monitoring points, discharge volume, regulated fuels, and special conditions.

Directly below each Environmental Regulation table is a history of notes/ correspondence. This shows the past notices of violation and citizen complaints. The next section lists the changes and improvements each industry has made and any awards or recognition they have received for their efforts.

Included below is a brief summary of the parameters that each permit type covers:

Air Permit

Under the provisions provided by the Federal Clean Air Act, the Minnesota Pollution Control Agency (MPCA) has the authority to issue air permits to facilities which require regulation. The following types of pollution are covered by the permits: particulate matter, opacity, carbon monoxide, nitrogen dioxide, sulfur dioxide, lead, volatile organic chemicals (VOC), and hazardous air pollutants thresholds. There are three industries in the neighborhood with air permits.

Some facilities may be Toxic Chemical Release Inventory Reporters (TRI) under the Community Right-to-Know Act and not be issued an air permit. This is because the type of release may not fall under the parameters outlined in an air permit.

The MPCA will be reissuing new air permits in the next two years. This is required by a 1990 amendment to the Clean Air Act. The order of issuing will be done by the facilities' Standard Industrial Classification (SIC) codes (see table below). If the facility is operating on an expired permit the owner or operator must comply with the new parameters.

Category	SIC Code Range	Application Deadline
A	0000 to 2399, excluding 1422, 1423, 1429, 1442, 1446, 2041, and 2048	January 15, 1995
B	2400 to 2999 and 4953, excluding 2951 and 2952	April 15, 1995
C	3000 to 4499	June 15, 1995
D	4500 to 5099, excluding 4953	September 15, 1995
E	5100 to 8199	December 15, 1995
F	8200 to 9999, including 1422, 1423, 1429, 1442, 1446, 2041, 2048, 2951, and 2952	February 15, 1996

Source: MPCA Amendments to Chapter 7007 Air Emission Permits

Sewer Permit
The rules for sewerage permits falls under the Clean Water Act. The Metropolitan Council Wastewater Services (MCWS) is the agency which regulates the sewerage permits. The industrial discharge permit allows a facility to use the Metropolitan Disposal System. Industrial waste includes any solid, liquid, or gaseous waste resulting from an industrial, manufacturing, commercial or business activity, or from the development, recovery or processing of a natural resource. The wastes regulated are as follows: Cadmium, Chromium, Copper, Cyanide, Lead, Mercury, Nickel, and Zinc. Also regulated are pH, Total Suspended Solids (TSS), Chemical Oxygen Demand (COD), and Temperature. The standards for each of these wastes differ by the type of manufacturing process - Electroplating, New Metal Finishing, Existing Metal Finishing. Five facilities in the neighborhood are regulated by a sewerage permit. Industrial sewer permits are renewed every three years.

Hazardous Waste License
Hazardous waste permits are issued and regulated by the Hennepin County Department of Environmental Management. Hazardous waste generators are required, under the Federal Resource Conservation and Recovery Act (RCRA) to keep detailed logs of the type and the amount of hazardous waste generated. The volumes given in this profile are estimates of hazardous waste production for the year 1995. There are thirteen facilities in the neighborhood that have a hazardous waste license. As of January 1, 1994 all hazardous waste generators are licensed on a calendar year basis, January 1 to December 31.

Toxic Chemical Release Inventory (TRI)
Manufactures are required, under the Emergency Planning and Community Right to Know Act (EPCRA), section 313, to report their emissions of toxic chemicals to the air, water, and land (see Appendix B for definitions). The current listing has identified over 300 toxic chemicals. Chemicals are added and deleted to the list annually. The reports from the manufacturers are compiled by the Minnesota Emergency Response Commission (ERC) and the U.S. Environmental Protection Agency (EPA) and put into a Toxic Chemical Release Inventory. There is currently only one TRI Reporter in the Columbia Park Neighborhood.

Manufacturers must report annually if they meet the following criteria:
- SIC code is between 20-39;
- Employ 10 or more full-time employees;
- Process or manufacture 25,000 lbs. or use 10,000 lbs. of a TRI designated chemical a year.

Accidental Releases
Section 304 of the EPCRA requires facilities to report to the ERC any accidental releases or spills of chemicals that are found to be over the reportable thresholds.

Chemicals Stored On- Site

Under sections 311 and 312 of the EPCRA, manufacturers and non-manufacturers are required to submit a listing of all the chemicals found on the Extremely Hazardous Substance (EHS) list which they store on-site as well as those which are transported off-site. The listings which contain information such as chemical name, amount, physical state, flammability, and reactions are sent to the local fire departments and the ERC. The EPCRA's purpose is to improve emergency planning for chemical accidents and to inform the citizens about the hazardous substances present in their respective communities. The EHS list is controlled and defined by the Occupational Safety and Health Act (OSHA) and at present contains over 350 hazardous substances. Substances on the list can also be added and deleted.

The reporting parameters vary between hazardous substances and extremely hazardous substances:

- Hazardous substances not found on the EHS list require reporting if stored in excess of 10,000 lbs.
- Extremely Hazardous Substances on the EHS listing require reporting if stored in excess of 500 lbs. or the designated threshold quantity.

D. Contaminated Sites

These are sites which are polluted/contaminated as a result of some type of leak, spill, or previous/current manufacturing process. Typically the soil and groundwater are the resources which are affected by contamination. The Permanent List of Priorities (PLP) is a state listing of the contaminated sites which pose a threat to public health and the environment. Nationally, the EPA keeps track of these sites on the Comprehensive Environmental Response, Compensation, and Liability Information System data base (CERCLIS).

There are two types of contaminated sites that exist in the Columbia Park Neighborhood: Petrofund sites and Superfund sites. The Petroleum Tank Compensation Fund (Petrofund) sites are sites in which an underground or above ground petroleum tank has either leaked or spilled, thereby causing the soil and/or groundwater to become contaminated. Landowners with a petrofund site are encouraged to clean up the site with possible compensation from the petroleum tank compensation fund.

Superfund sites are sites which have had hazardous substances spilled or leaked and/or have accumulated due to past manufacturing processes. The soil and groundwater are the resources most commonly affected at these sites. The EPA lists the sites nationally on their CERCLIS list. Superfund sites are put on the Hazard Ranking System and are given scores from 1 to 65 with 1 being low priority and 65 high priority. Authority to oversee the sight is dependent upon the extent of contamination and the type of contaminating substance. If the substance is considered an agricultural contaminant the Minnesota Department of Agriculture (MDA) is given authority. The MPCA Superfund division is given control of all other sites.

III. Petrofund Sites

Soo Line - Shoreham Yards
2800 Central Ave. N.E.
Minneapolis, MN 55418

MPCA leak site #1571

A diesel fuel spill occurred on August 6, 1988 and was reported to the MPCA. The spill amounted to 3,500 gallons of #1 and #2 fuel oil (diesel fuel). The spill was determined to be caused by a failed air bladder in the fuel storage tank. Approximately 1600-1900 gallons of the fuel oil was immediately recovered. On August 9-10, 1988 the remaining soil was excavated for thin spreading, the hole was then backfilled with clean material. Soo Line then waited for further correspondence from the MPCA.

On August 24, 1988 the MPCA determined that all contamination could not be excavated due to the physical limitations involved. They therefore suggested a complete investigation of the area. During the investigation a large area of contaminated soil was noted within the refueling area in Shoreham yards.

February 24, 1989 - A report by Wenk Associates, Inc. found that there had been heavy contamination of the ground water with petroleum product.

May 12, 1989 - MPCA approved workplan laid out by Delta Environmental Consultants, Inc. who were hired by Soo Line. Eight monitoring wells were drilled and a number of subsequent soil bore holes were made.

May 4, 1992 - Free product (fuel oil) was initially detected in MW-2 and MW-3 and later in MW-308 and MW-310. Recovery began June 1991 and consisted of hand bailing each well every 2 weeks. Since recovery started, 170 gallons of free product had been removed.

November 1992 - Delta installed 2 free product recovery wells (RW-1 and RW-2). Each well contains a skimmer pump which collects the fuel oil passively and removes the product as it accumulates in the well. A vacuum was placed in RW-1 to get the fuel oil to move into the well, both the wells were sprayed with phosphate to speed the recovery process. Less than 1 inch of product has accumulated in the wells.

As of February 2, 1994 fuel oil was still found to be present in Monitoring Wells: MW-3 and MW-308 (the pumphouse area), MW-2 and MW-314, and occasionally MW-309 (collector pan area). Recovery is still done by bailing the wells, approximately 4 gallons are removed each month. Since June 1992 a total of 75 gallons have been removed. **This site is currently open and will continued to be cleaned up (see the following map).**

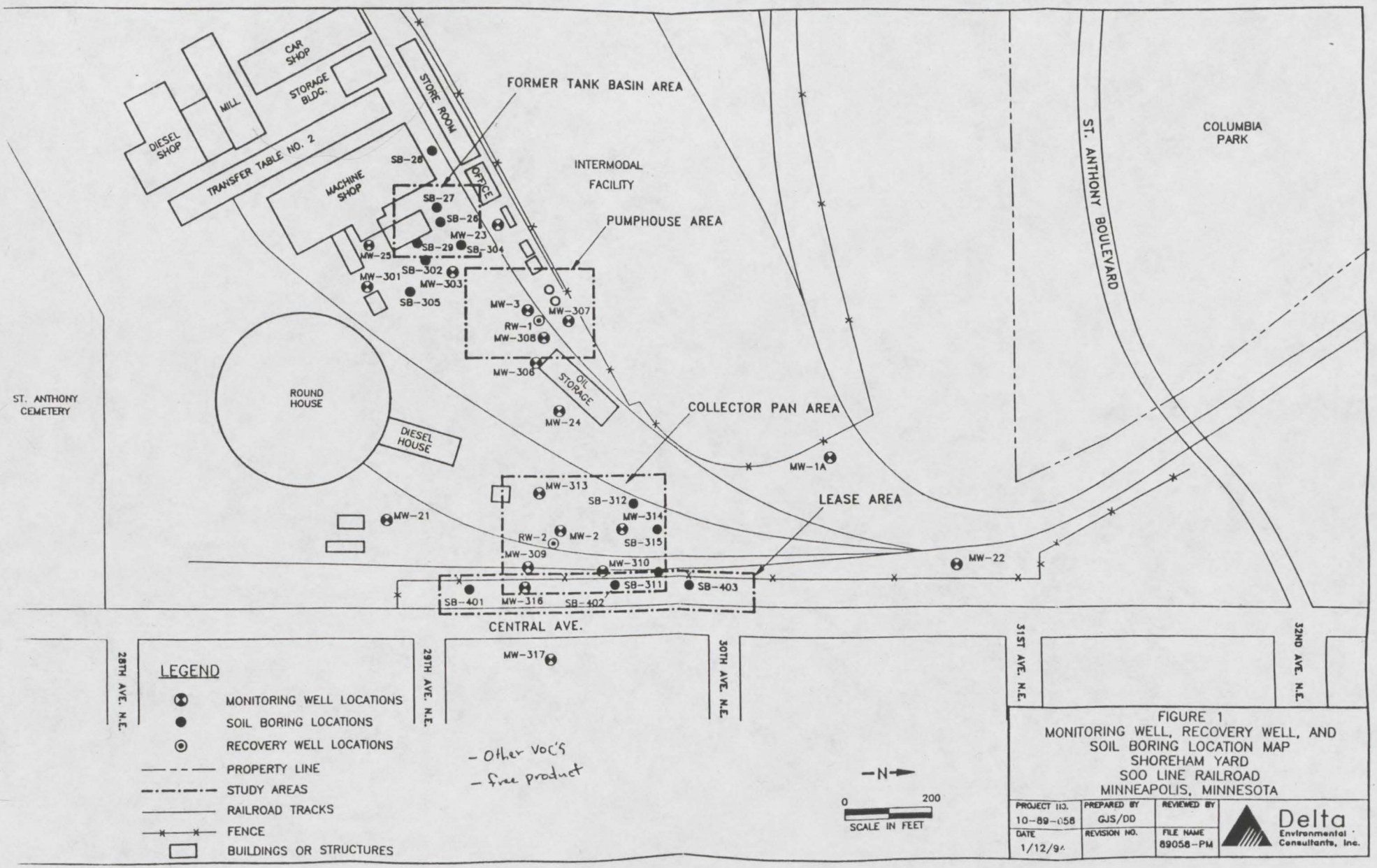


FIGURE 1
MONITORING WELL, RECOVERY WELL, AND SOIL BORING LOCATION MAP
SHOREHAM YARD
SOO LINE RAILROAD
MINNEAPOLIS, MINNESOTA

PROJECT NO.	PREPARED BY	REVIEWED BY
10-89-058	GJS/DD	
DATE	REVISION NO.	FILE NAME
1/12/9[illegible]		89058-PM

Delta Environmental Consultants, Inc.

Petrofund Sites (continued)

Columbia Golf Course
3300 Central Ave.
Minneapolis, MN 55418

MPCA leak site #4100

An underground tank was removed from this site. A very small amount of (3-4 yards) contaminated soil was removed. 37 ppm of TPH as fuel oil was found in the soil. **As of December 19, 1994 the clean up had been adequately addressed and the site was closed.**

IV. Clark Station

Northern States Power Company owns and operates a coal ash storage facility on a parcel of land adjacent to the Riverside Steam Plant. This facility is also known as Clark Station. It is located on the corner of Marshall Street and St. Anthony Parkway.

The MPCA authorized the construction and operation of a one acre fly ash terminal on January 11, 1988. The facility operates under Slag Utilization Permit SW-356 and SW-207. The storage capacity is 70,000 cubic yards. The standards of the permit maintain that fly ash "shall be, transported, placed, and stored prior to final placement in a manner that reasonably protects the slag from spillage and wind." Fly ash has a very low leaching potential and a low potential for dust generation. Ash is also non-combustible so the likelihood of a fire is remote. There is however, an Emergency Response Plan that was prepared in the event of an emergency.

This facility is used for the temporary storage of fly ash, bottom ash, and slag that is generated at NSP's metro steam plants. Another function of the facility is to allow the ash to "set-up" on-site. This allows for the ash to cement on-site rather than in the transport vehicles which makes unloading easier and less dangerous.

V. Superfund site

Site Name: **Cedar Services**
MDA Case File Number: 91-0082
Location: Soo Line - Shoreham Yards
University Ave. & 4th St.
Minneapolis, MN 55418

HRS Score: 17

This site consists of 2.5 acres located within the Soo Line's Shoreham Yards in Northeast Minneapolis. There had been in the past five separate companies which operated individually in different areas of the Shoreham Yards. They were Cedar Services, Inc. and later Scott Pole & Treating Company; MacFarland Pole and later Dworsky Barrel; and The Idaho Pole Company.

History:

- Listed on EPA's - CERCLIS on 12/28/87.
- MPCA designated site as medium priority on the Permanent List of Priorities.
- June 13-16, 1989 - MPCA conducted a screening site inspection on the Cedar Services site.
- Transferred to the Minnesota Department of Agriculture's Superfund program in 1992.

During the Site inspection performed by the MPCA in 1989, 12 soil samples were collected and 7 soil borings were performed. The soil was found to be contaminated with Pentachlorophenol (PCP) and Polynuclear Aromatics (Creosote). These two chemicals are considered agricultural pollutants and the site was therefore transferred to the Minnesota Department of Agriculture (MDA) Superfund program. No monitoring wells have been drilled at the site therefore the ground water has not been tested for contamination which is a possibility. The other two sites at the Shoreham yards have not yet been investigated, but it is believed they are contaminated with the same chemicals due to the similarity of the operations.

Soo Line has selected Barr Engineering as their environmental consultant. On March 22, 1995 The Agriculture Chemical Response Reimbursement Account Board met with Soo Line and will make a determination on whether Soo Line will be approved for a reimbursement on the site clean-up. The maximum financial assistance is $200,000 per site. There has been no determination as to whether each of the sites located on Shoreham Yards constitute separate "sites".

VI. Lake Sandy

History:
Lake Sandy was located within the bounds of present day Columbia Park and Golf Course. The Park Board acquired the land in the late nineteenth century and started to drain the shallow lake almost immediately. Drain tiles were laid in 1893 and connected to existing sewer lines. By 1914-15 the lake had ceased to exist. The park was used for athletic fields and records refer to it as "the meadow." Drainage presented an ongoing problem.

Contrary to popular opinion, there is no evidence of a massive filling of the lake basin with the dredgings from Lake of the Isles. Construction of St. Anthony Parkway and the golf course required some filling in. The former lake basin continued to be a wetland until 1937 when it was plowed and seeded and fairways were installed.

Citizens have requested the regeneration of Lake Sandy from the year 1928 to present day. "The geology of Columbia Park favors the creation of lake and wetlands," writes Professor Pfannkuch, but "the economics and politics of the situation in Columbia Park may be more critical, in the long run, than the hydrology and geology of the proposed lake site."

Construction of the parkway has cut the basin in two. If restored, both basins would be relatively shallow, approximately the same mean depth as Lake of the Isles, 8 feet in the north basin and 6 feet in the south basin. The south basin could be filled and maintained with runoff from its own watershed and would be roughly 6 acres; the north would be about 40 acres. It could sustain a lake once it was filled, but further investigations are needed to determine ground water flow.

For a more detailed study on the feasibility of restoring Lake Sandy see the article by H.O. Pfannkuch in Appendix C.

All information taken from: **H.O. Pfannkuch. 1986. "Lake Sandy Restoration Project Feasibility Study". CURA Reporter.**

VII. Community Involvement

A. Permit Oversight

All permits have an issue date and an expiration date. The length of time a permit is valid depends upon the regulated source of pollution (air, water, sewer, hazardous waste).

Facilities that require a permit(s) must make plans to renew their existing permit before the legal renewal date as specified in the permit rules and application. The public does have a chance for comment on the permit renewals. This is an opportune time for the community to become involved in the process. At this time citizens can voice the concerns they have over specific facilities within their neighborhood. The notice for a permit renewal will be published in the **Minnesota State Register,** copies of the register may be obtained through a yearly subscription or from the local library. Announcements on the date and times of these permit renewals may also be found in the **Legal Notice Section** of The Star Tribune and the **Public Notice Section** of the Pioneer Press.

*** See Appendix A for Quarterly Calendar of Permit Renewal Dates and Individual Facility Permit Time Table.**

B. Good Neighbor Agreement

The Good Neighborhood Agreement is a new approach designed at cutting toxic pollution. Communities and industry negotiate directly on ways to prevent pollution. This approach is positive for both the community and industry. The process allows citizens to have a stronger, more positive voice for their concerns. The industries are given a chance to point out their past reductions and improvements as well as their future goals.

As required by the Minnesota Toxic Pollution Prevention Act (TPPA), any facility which reports on the TRI must submit a toxic pollution prevention plan every two years. These plans are confidential and are not legally binding. The facility must also submit annual pollution progress reports which are available for public review. This would be a good first step for a community to find out the facility's progress.

The second step is to begin negotiations with the local business/manufacturer and to assemble a working group of representatives from the neighborhood. In many neighborhoods these groups already exist. Working groups should include representatives from the facility as well as the neighborhood. This will allow all sides to voice their special concerns and receive higher quality information and feedback. The community and the business/manufacturers can then draw up a plan which both sides agree upon which will work to reduce waste and pollution problems. Greater detailed information and help with this process can be obtained through **Citizens for a Better Environment** (see Appendix F).

VIII. Overview of Findings

A. Environmental Resources

There are 11 existing waterbodies in the neighborhood. One of them being the Mississippi river and the other ten are various seasonally flooded wetlands. There is also one former water body (Lake Sandy: see CURA article in Appendix C).

There are 4 parks in the neighborhood. Two are located within the residential area (Hi-View and Architect Triangle). The third park , St. Anthony Parkway, follows the short stretch of the Mississippi river. The fourth is the Columbia Park and Golf Course.

B. Facilities

There are 14 facilities that have one or more type of environmental regulation. The information comes from 11 different categories of regulation. The number of permits by type are as follows:

- Air Permit - 3
- Sewer Permit - 5
- Hazardous Waste License - 13 (8 Very Small Quantity Generator, 3 Small Quantity Generator, 2 Large Quantity Generator)
- Chemicals On-Site - 5
- Toxic Release Inventory reporters - 1
- Superfund Site - 1
- Petrofund Site - 1

Many of the businesses and manufacturers have made improvements in the way they manufacture their products. As a consequence some have reduced the amount of waste and pollution generated.

C. Contaminated Sites

Columbia Park had as many as three Petrofund sites at one time. Two of theses sites: Fleming Company (formerly Gateway) and Columbia Golf Course have been cleaned up and are closed. There is currently only one active Petrofund site and one active Superfund site in the neighborhood, both are located at the Soo Line Railroad - Shoreham Yards Location. Remediation efforts will continue at these sites until they are adequately cleaned up.

VIV. Recommendations

Permit Tracking

There are a total of 21 pollution permits in the Columbia Park Neighborhood, including three air permits, five industrial sewer discharge permits, and thirteen Hazardous waste licenses.

Appendix A includes two tables: a Quarterly Calendar for Permit Renewals and a Time Table for Individual Facilities. The residents of the neighborhood should decide which of these facilities are of greatest concern. Factors that should be considered are the type and size of emissions, the history of complaints, past violations, and improvements made. Once it is decided which permits for each facility should be tracked, look at the tables (Appendix A) to find expiration dates. Then proceed to contact the appropriate agency to find out dates and times for public comment. This plan would work more efficiently if one or two people were specifically assigned to this task. **For air permits look at table under Section II - Guide to Profile.**

Emergency Response Plans

There are 5 facilities in the neighborhood that report storing chemicals on-site under the Resource Conservation and Recovery Act (RCRA). Included in the 5 is also one facility that reports on the Toxic Release Inventory (TRI). These facilities are all required to implement an Emergency Response Plan. The emergency response plan identifies routes to be used in evacuation. The Emergency Response Commission is the agency which oversees this program. The Local Police and Fire Departments are required to have the Emergency Response Plans for each industry in their respective community. The Emergency Response Plans are available for public review.

The neighborhood should make sure the 5 facilities with chemicals on-site have completed their response plans and that they are well designed. The neighborhood could look for assistance from Citizens for a Better Environment.

Citizen Suits

If a facility in the neighborhood is violating environmental regulations regularly and the state is not taking proper action against them, the neighborhood has the option of suing the facility. This process can be started with the help of Citizens for a Better Environment.

Pollution Prevention

There is a fair amount of industry in the Columbia Park Neighborhood. Thirteen of the facilities generate hazardous waste. The majority are Very Small Quantity Generators (VSQG). These facilities produce less than 200 lbs. of hazardous waste per month. The MPCA has developed rules allowing VSQG's to transport their waste in their own vehicles to a licensed VSQG collection site without filing a manifest. The VSQG in the neighborhood should be considered a low priority.

The facilities which the neighborhood should focus on are the Small Quantity Generators (SQG) and, more importantly the Large Quantity Generators (LQG). There are 3 SQG's and 2 LQG's in Columbia Park Neighborhood. The residents should initiate a dialogue with these businesses/manufacturers and consider a program or plan that would reduce the amount of hazardous waste produced. The Minnesota Office of Environmental Assistance has a community assistance program which is designed to aid in this type of community activity. The program works with the community by bringing in free technical assistance for business and industry. They suggest ways the facilities can become environmentally aware and responsible.

Noise/Odor Pollution

There are 3 separate railroad spurs that intersect the Columbia Park Neighborhood. All of these lines are in close proximity to the residential area. There is a history of documented complaints from residents concerning the odor and noise that is emitted from the locomotive engines. This is a pollution problem that is not under any type of environmental regulation at this time. Residents should continue to voice their concerns over the problems associated with the locomotive engines, and also try to set up a dialogue with the Railroad Company and initiate a plan to reduce the noise and odor from the engines.

Cedar Services Superfund Site

There has yet to be any testing of the groundwater at this superfund site. As stated earlier the soil is contaminated with creosote and pentachlorophenol. There is a good chance these chemicals have reached the water table and contaminated the ground water. I recommend contacting the Minnesota Department of Agriculture and request them to initiate some type of groundwater monitoring in order to determine levels of contamination.

Household Hazardous Waste Clean up
Industries are not the only polluters in the neighborhood. The residents of the neighborhood can also have a significant negative impact by improperly disposing of household hazardous waste. When these chemicals are disposed of by sewer and landfills they pose the threat of contamination to the soil and water. The neighborhood should begin a program to promote the use of alternatives to household hazardous waste. The Office of Environmental Assistance can supply the information on alternatives.

Reclaiming Lake Sandy
The residents of the neighborhood should consider the long-term project of restoring Lake Sandy. There has already been a phase one feasibility study performed and it found that there is a possibility this could be accomplished. A restored Lake Sandy would improve the neighborhood's quality of life by creating a new recreation space; it would increase the diversity of plant and wildlife habitat; and would serve as a filtering system for precipitation and surface runoff.

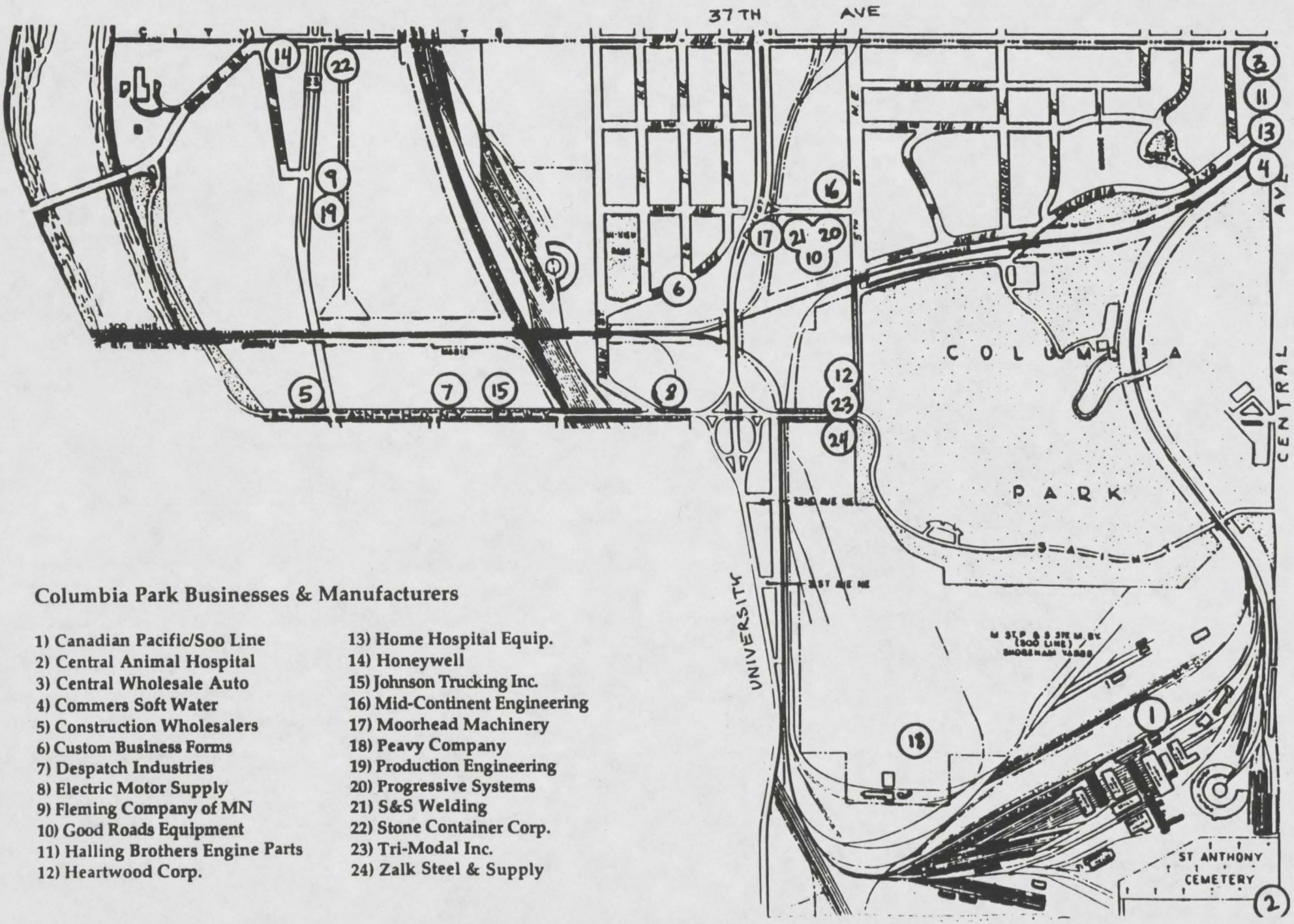
The two primary problems with restoring the lake are of course the economics and the politics. A third consideration is that the golf course already occupies the former lake basin; what would be done about the loss of the golf course?

The main players in this decision are the Minneapolis Board of Parks and Recreation and the citizens of the Columbia Park Neighborhood and those in the surrounding communities. The decision on whether the Lake is restored is up to these groups of people. There is a small collection of documents that has been compiled by the Park Board about Lake Sandy which are available for public review. If the residents of the neighborhood are interested in this project, I recommend contacting all concerned parties mentioned above and initiating the next phase of the study which will reveal the economic, social, and political feasibility associated with the project.

Storm Water Runoff
Storm water runoff is a major source of water pollution. Columbia Park neighborhood has one major storm pipe that drains into the Mississippi river. The actions of the citizens have a large impact on the quality of water. A good example would be the over-use of pesticides, herbicides, and fertilizers for their lawn. The runoff from these chemicals contributes to water pollution. I recommend starting a program that would make businesses and homeowners more aware of the impact their practices have on water quality.

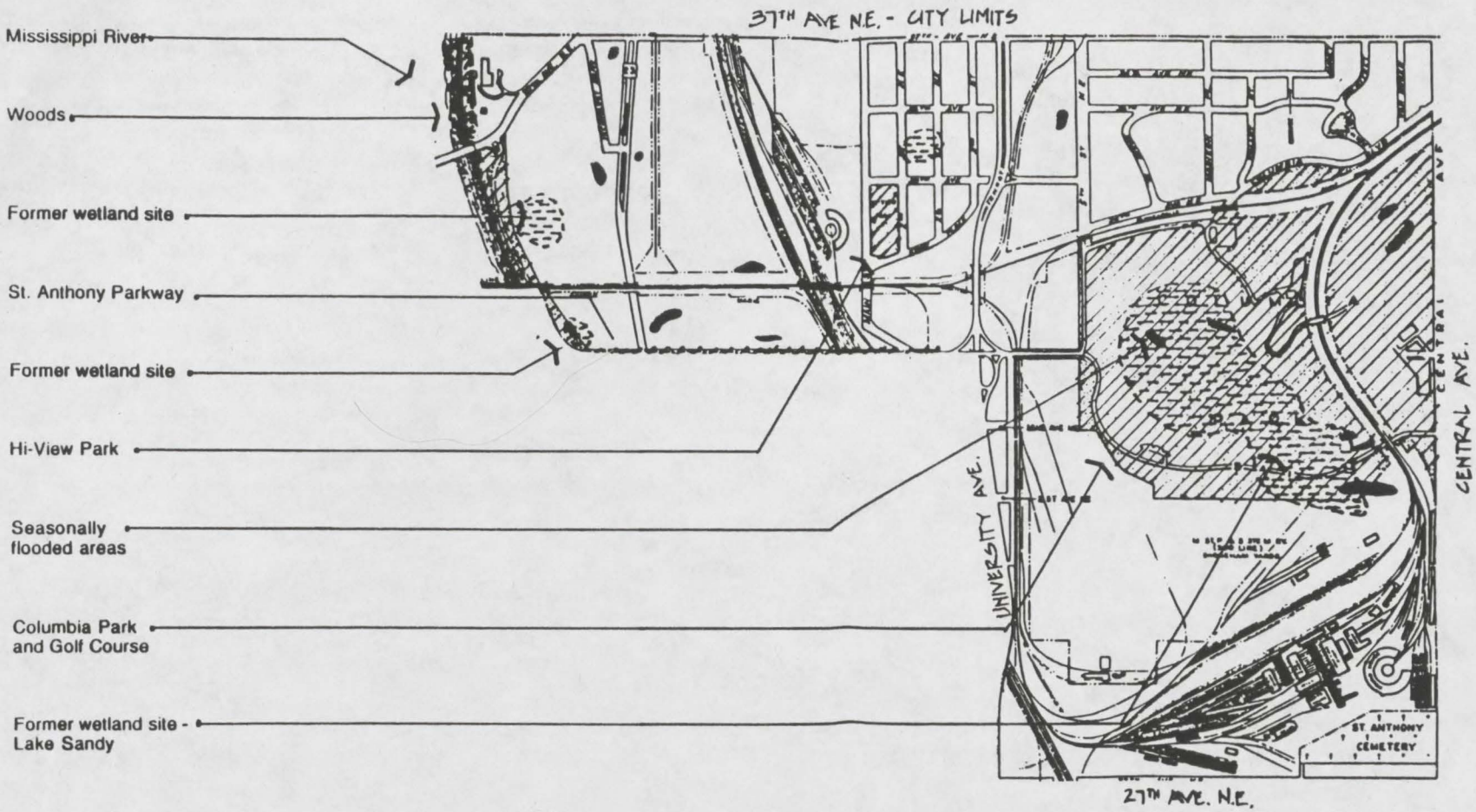
COLUMBIA PARK NEIGHBORHOOD BUSINESSES

COMPANY	ADDRESS	ZIP CODE	TRI REPORTER	CHEMICALS ON-SITE	AIR PERMIT	SEWER PERMIT	HAZARDOUS WASTE	SUPERFUND SITE	PETROFUND SITE
Canadian Pacific Railways Soo Line - Shoreham Yard	2800 Central Ave NE	55418		X	X	X	X	X	X
Central Animal Hospital	2700 Central Ave. NE	55418							
Central Wholesale Auto	3650 Central Ave. NE	55418							
Commers Soft Water	3620 Central Ave. NE	55418							
Construction Wholesalers, Inc. Fly Ash Terminal (NSP)	3356 Marshall St	55418							
Custom Business Forms	210 Edge Place NE	55418				X	X		
Despatch Industries	63 St Anthony Parkway	55418					X		
Electric Motor Supply	211 St Anthony Parkway	55418							
Fleming Company of Minnesota (formerly Gateway Foods)	3501 Marshall Ave NE	55421				X	X		
Foley Belsaw Company	3300 5th St. NE	55418							
Halling Brothers Engine Parts	3638 Central Ave. NE	55418							
Heartwood Architectural Woodwork Corporation	3310 5th St NE	55418		X			X		
Home Hospital Equipment	3634 Central Ave. NE	55418							
Honeywell Technology Center	3660 Techology Drive	55418		X			X		
Johnson Trucking, Inc.	81 St. Anthony Parkway	55418					X		
Mid-Continent Engineering	405 35th Ave NE	55418		X		X	X		
Moorhead Machinery & Boiler Company	3477 University Ave NE	55418					X		
Peavy Comnpany Peavy Burdik Shore Grain Elevator	2901 5th St NE	55418			X				
Production Engineering	3515 Marshall St NE	55418					X		
Progressive Systems	416 35th Ave NE	55418							
S&S Welding	416 35th Ave NE	55418					X		
Stone Container Corporation	50 37th Ave NE	55421			X		X		
Tri-Modal, Inc.	3300 5th St NE	55418							
Zalk Steel & Supply Company	446 St Anthony Parkway	55418	X	X		X	X		



Columbia Park Businesses & Manufacturers

1) Canadian Pacific/Soo Line
2) Central Animal Hospital
3) Central Wholesale Auto
4) Commers Soft Water
5) Construction Wholesalers
6) Custom Business Forms
7) Despatch Industries
8) Electric Motor Supply
9) Fleming Company of MN
10) Good Roads Equipment
11) Halling Brothers Engine Parts
12) Heartwood Corp.
13) Home Hospital Equip.
14) Honeywell
15) Johnson Trucking Inc.
16) Mid-Continent Engineering
17) Moorhead Machinery
18) Peavy Company
19) Production Engineering
20) Progressive Systems
21) S&S Welding
22) Stone Container Corp.
23) Tri-Modal Inc.
24) Zalk Steel & Supply



Parks, Wetlands and Shoreline Conditions
Mississippi Corridor Neighborhood Coalition

Custom Business Forms
210 Edge Place N.E.
Minneapolis, MN 55418
Phone: 789-0002
Fax: 789-6321

Business Profile

SIC Codes: 2761 - Manifold Business Forms

Custom Business Forms is a full-service printing company specializing in snap-apart continuous forms and word processing forms for the industry.
President: Frank A. Miske Jr.
Established in 1969
Employees: 95

Hazardous Waste License

License Number	Size	Issue Date	Expiration Date
053-03760	Very Small Quantity Generator	February 2, 1995	December 31, 1995

Waste Minimization/Toxicity Reduction Efforts (1994):

- Eliminated isopropyl alcohol in printing production.
- Installed Etch Blender Chiller System which eliminates dumping Etch solution into sewer system daily. It now can be re-used for 6-12 months.
- Use less Volatile Organic Chemicals (VOC's)
- Recycle press wash from rags.

Hazardous Waste Production & Volumes

Hazardous Waste	Estimated Production
Non-Halogenated Hydrocarbons	100.00 gallons
Silver, General Photochemicals	96.00 gallons
Silver, General Photochemicals	25.00 gallons
Chromium	1.00 gallon
Silver	10.00 gallons
Non-Halogenated Hydrocarbons	55.00 gallons
Non-Halogenated Hydrocarbons	200.00 gallons
Alcohol	50.00 gallons
Petroleum	55.00 gallons
Mercury	3.00 gallons

Environmental Regulation

	Sewer Permit
Permit Number	0895
Issue Date	June 1, 1994
Expiration Date	May 31, 1997
Regulated Pollutants	pH, TSS, COD, Lead
Pollution Origination	Film processing areas, press roller cleaning, rubber stamp cleaning, and from spent aluminum plate developer.
Reporting Requirements	Industrial Waste Discharge Report once per year.
Discharge Volume	1,260 gallons/day
Monitoring Points	One: Cleanout located in men's restroom.

Notes/Correspondence:

Sewer Permit:

March 15, 1994 - Monitoring Project - Compliance within permit limits. However, waste water strength chargeable due to high COD and TSS values.

November 10, 1993 - Chrome concentration of cleaner too high (1900 mg/L) to be sewered. Disclosure to Hennepin County Hazardous Waste.

*No history of violation

Improvements: Solvent containing Siv-Rol replaced with detergent. Nalgi-Sol solvent discontinued and replaced with plain hot water.

Despatch Industries
63 St. Anthony Parkway
Minneapolis, MN 55418
Phone: 781-5363
Fax: 781-0110

Mailing Address
P.O. Box 1320
Minneapolis, MN 55440-1320

Business Profile

SIC Codes: 3567 Industrial furnaces and ovens

Despatch Industries manufactures standard and custom industrial heat processing equipment and environmental simulation chambers for product testing.
Sid Johnston, President
Established in 1962
Employees: 400
Sales: 42 million

Hazardous Waste License

License Number	Size	Issue Date	Expiration Date
053-04230	Very Small Quantity Generator	April 18, 1995	December 31, 1995

Waste Minimization/Toxicity Reduction Efforts (1994):

- Use of lead free paints in manufacturing process.
- Minimize packaging wherever possible to reduce wood scrap.
- Re-use packing materials received from suppliers when possible.
- Send left over paint with jobs for touch-up by customers.

Hazardous Waste Production & Volumes

Hazardous Waste	Estimated Production
Petroleum	100.00 gallons
Paint	880.00 gallons
Non-Halogenated Hydrocarbons, Paint	55.00 gallons
Non-Halogenated Hydrocarbons	72.00 gallons
Mercury	15.00 gallons

Fleming Company of Minnesota (formerly Gateway Foods)
3601 & 3501 Marshall Ave. N.E.
Minneapolis, MN 55421
Phone: 781-8051
Fax: 785-7660

Business Profile

SIC Codes: 5141 Groceries, General line grocery stores

Fleming Company is a complete-line wholesale grocery company servicing stores in 10 states. Primary customers are independent retailers under IGA franchise. Fleming Co. owns Rainbow Foods of Minneapolis.
Jerry Nelson, President
Employees: 100+ (in MN); 630 (Total)
Sales: 20 million + (in MN); 840 million (total of all states)

Environmental Regulation

	Sewer Permit
Permit Number	2109
Issue Date	April 17,1991
Expiration Date	March 31, 1994
Regulated Pollutants & Parameters	pH, TSS, COD, Benzene, Ethyl Benzene, Toluene, Xylene, and Total **(see below for concentrations)**
Regulated Fuels	Hydrocarbons as gasoline or fuel oil #2
Special Conditions	All contaminated ground water shall pass through a pretreatment system consisting of an oil/water separator tank prior to discharge to the sanitary sewer.
Reporting Requirements	Self-monitoring reports 4 times per year. Sample collection at point of discharge once per month.
Discharge volume	11.6 gallons/day, 4250 gallons/year

Notes/Correspondence:
Sewer Permit:
January 11, 1991- DPRA, Inc. completed construction of a petroleum recovery system for Gateway.

August 1, 1991 - NOV - Failing to complete and submit a routine self-monitoring report to the commission by July 30, 1991.

March 23, 1994 - special - Letter explaining whether Gateway Foods should still be permitted by the Waste Water Commission.

Expected concentrations in sewer discharge

Benzene - 0.042 mg/L
Ethyl Benzene - 0.0034 mg/L
Toluene - 0.040 mg/L
Xylene - 0.21 mg/L
Total Hydrocarbons as Gasoline - 4.0 mg/L

Hazardous Waste License

License Number	Size	Issue Date	Expiration Date
053-05847	Very Small Quantity Generator	January 1, 1994	December 31, 1995

Hazardous Waste Production & Volumes (1994)

Hazardous Waste	Estimated Production
Petroleum	2,600.00 gallons
Lead Acid Batteries	7,766.00 count
Petroleum	220.00 gallons
Mixed Solvents	4.00 gallons
Batteries (Mercury)	1,180.00 count
Non-Halogenated Hydrocarbons	2.00 gallons

Heartwood Architectural Woodwork Corporation
3310 5th St. N.E.
Minneapolis, MN 55418-1720
Phone: 789-2240

Business Profile

SIC Codes: 2511 - Wood Household Furniture
2434 - Wood Kitchen Cabinets

Heartwood Corp. specializes in wooden furniture and architectural woodworking.
Contact: M. Quirk
Established in 1981
Employees: 27
Sales: 2.75 million

Hazardous Waste License

License Number	Size	Issue Date	Expiration Date
053-00585	Very Small Quantity Generator	December 29, 1994	December 31, 1995

Waste Minimization/Toxicity Reduction Efforts (1994):

- Conditionally exempt
- Switched from Fluorescent to Halide lighting.
- Recycles all waste oil, and burns solvents.

Hazardous Waste Production & Volumes

Hazardous Waste	Estimated Production
Mixed Solvents	110.00 gallons
Petroleum	8.00 gallons
Mixed Solvents	24.00 gallons
Batteries - lead/acid	10.00 lbs.
Batteries	10.00 count

1994 Chemicals On-Site Data (311, 312, & 304)

ERC Site #27135049	Extremely Hazardous Substances	Chemicals & Other Hazardous Substances
Chemical Name	-	Lockweld 951 Conversion Varnish V84-J91
CAS #	-	-
Maximum Daily Volumes (ranges)	-	100-999 lbs. 100-999 lbs.
Maximum Average Volumes (ranges)	-	100-999 lbs. 100-999 lbs.
Storage Container 1	-	Steel drum ambient pressure & temperature. Same for second chemical.
Storage Container 2	-	Can, ambient pressure & temperature.
Location	-	Flammable Storage Area. Finish room
Remarks	-	Below thresholds in 1993.

Honeywell
Systems & Research Center
3660 Technology Drive
Minneapolis, MN 55418
Phone: 782-7000

Business Profile

SIC Codes: 3674 - Semiconductors & Related Devices

This division of Honeywell is in charge of physical control service programs, computer and microelectronics science, and optical and signal image processing.
Established in 1964
Employees: 500-1000
Sales: 10 million and above

Hazardous Waste License

License Number	Size	Issue Date	Expiration Date
053-07017	Very Small Quantity Generator	February 2, 1995	December 31, 1995

Waste Minimization/Toxicity Reduction Efforts (1994):

- Eliminated CFC's and vapor degreaser.
- Switched to citrus based solvents and continue to use small amount of CFC's in aerosol containers.
- Flammable and petroleum wastes continues to be minimal.
- Considering use of synthetic oils to extend the use and reduce waste.

Hazardous Waste Production & Volumes

Hazardous Waste	Estimated Production
Paint Thinner	25.00 gallons
Fluorescent Bulbs	300.00 count
Superagitene Flammable Solvent	1.00 gallons
Freon	1.00 gallons
Spent BCO Biowash Solution	15.00 gallons
Circuit Boards (Cadmium)	5.00 lbs.
Batteries	25.00 lbs.
Lab Pack Waste	1,000.00 lbs.

1994 Chemicals On-Site Data (311, 312, & 304)

ERC Site #271350278	Extremely Hazardous Substances	Chemicals & Other Hazardous Substances
Chemical Name	-	Nitrogen
CAS #	-	7727379
Maximum Daily Volumes (ranges)	-	10,000-99,999 lbs.
Maximum Average Volumes (ranges)	-	1,000-9,999 lbs.
Storage Container 1	-	Above ground tank with greater than ambient pressure, cryogenic conditions.
Storage Container 2	-	-
Location	-	Pad on south side of building.
Remarks	-	-

Johnson Trucking, Inc.
81 St. Anthony Pkwy.
Minneapolis, MN 55418
Phone: 788-8570

Business Profile

SIC Codes: 4231 - Truck Terminal Facilities

Contact: Roger Veldhuizen

Hazardous Waste License

License Number	Size	Issue Date	Expiration Date
053-07548	Very Small Quantity Generator	December 30, 1993	December 31, 1994

Waste Minimization/Toxicity Reduction Efforts (1994):

- Conditionally exempt

Hazardous Waste Production & Volumes

Hazardous Waste	Estimated Production
Cleaning Fluid	167.00 gallons
Petroleum	3,000.00 gallons
Oil Filters	90.00 gallons
Lead Acid Batteries	1,000.00 count

Mid Continent Engineering
405 35th Ave. N.E.
Minneapolis, MN 55418-1126
Phone: 781-0260
Fax: 782-0320

Business Profile

SIC Codes: 3499 - Fabricated Metal Products

Mid Continent does precision machining, custom sheet metal fabrication, and manufactures computer hardware. Primary customers are the computer industry, aerospace divisions of large companies, and some commercial accounts.
Jacobs Trading Co. leases loading dock space from Mid Continent.
Charles Marvin, President
Established in 1950, Moved to Columbia Park in 1989
Employees:130
Sales: 11 million

Hazardous Waste License

License Number	Size	Issue Date	Expiration Date
053-09720	Small Quantity Generator	February 2, 1995	December 31, 1995

Waste Minimization/Toxicity Reduction Efforts (1994):

- Degreaser removed from chemical finishing area.
- Stripper tank removed from chemical finishing area.
- Oil based coolants replaced with water based.

*** Mid Continent is very close to being considered a Large Quantity Generator (LQG). Some months it may be going over LQG limit**

Hazardous Waste Production & Volumes

Hazardous Waste	Estimated Production
Petroleum	165.00 gallons
Unknown Bases	6,750.00 gallons
Mixed Acids	750.00 gallons
Mixed Acids, Chromic Acid	550.00 gallons
Thinner - Toluene, Xylene, MGR	425.00 gallons
Electric Motor Cleaner	110.00 gallons
Waste Paint	660.00 gallons
Phosphoric Acid	750.00 gallons
Paint	360.00 gallons
Machineshop Coolant	1,000.00 gallons
Freon (Chlorofluorocarbons)	165.00 gallons
Mixed Metals	5,300.00 gallons
Chromium	550.00 gallons
Oil Filters	2.00 lbs.
Fluorescent Lights	180.00 count

Environmental Regulation

	Sewer Permit
Permit Number	0563
Issue Date	December 1, 1994
Expiration Date	November 30, 1997
Regulated Pollutants	pH, TSS, COD, Chromium, Lead, Nickel, Zinc
Regulated Fuels	
Reporting Requirements	Industrial Waste Discharge Report 2 times per year.
Discharge Volume	28,242 gallons/day
Enforcement Activity	see below
Pollution Points	floor trench located in tank room.

Notes/Correspondence:
Sewer Permit:
October 11, 1994 - No violations during survey of the MCWS local limitations.

February 24, 1993 -NOV - Failing to meet local limitations for pH on January 27-28, 1993 and monthly average for chromium.

August 3, 1992 - NOV - Failing to complete and submit self-monitoring report for January-June 1992.

April 12, 1990 -NOV - Failing to meet local limitations for pH during MCWS monitoring project December 5-8, 1989.

December 13, 1989 - NOV - Failure to meet new source metal finishing pretreatment standards or chromium on November 14-15, 1989.

October 19, 1989 - NOV - Failing to submit within 90 days of start-up:
- Analytical results from 3 consecutive days of monitoring.
- Signed statement of compliance or non-compliance.
- total toxic organic management plan.

June 9, 1988 - NOV - Failing to meet local limitations for pH during MCWS monitoring project on May 2-4, 1988.

Improvements:
June 17, 1994 - Mid-Continent has hired an environmental engineer to address pollution problems.

- Chrome has been replaced in 2 tanks.
- Paint strippers, Methylene chloride and Ethylene trichloride are no longer used

June 8, 1994 -Company recieved an awarded for it's efforts in pollution prevention from The Metropolitan Council Wastewater Services (MCWS).

Pollution Prevention Program:
Investigating new chemical alternatives
Future plans to eliminate as many solvents as possible.
Reviewing and updating chemical spill procedures.
Employee Environmental Education.

1994 Chemicals On-Site Data (311, 312, & 304)

ERC Site #271350472	Extremely Hazardous Substances	Chemicals & Other Hazardous Substances
Chemical Name	-	-
Remarks	-	Not subject to 313 reporting per letter 11/1/93. Does not report 311 and 312 data.

Moorhead Machine & Boiler Company
3477 University Ave. N.E.
Minneapolis, MN 55418-1136
Phone: 789-3541
Fax: 789-3540

Business Profile

SIC Codes: 3443 - Fabricated Plate Work (Boiler Shops)
3499 - Metal Products

Moorhead Machine & Boiler is a contract manufacturer of steel tanks, duct work, stacks weldments; boiler erection, repair, and maintenance for clients nationwide.
President: Jon A. Schmoeckel
Established in 1917
Employees: 175
Sales: $10-25 million
Parent Company: Park Corp., Cleveland , Ohio

Hazardous Waste License

License Number	Size	Issue Date	Expiration Date
053-25991	Very Small Quantity Generator	January 1, 1994	December 31, 1995

Hazardous Waste Production & Volumes (1994)

Hazardous Waste	Estimated Production
Petroleum	200.00 gallons
Mixed Solvents	50.00 gallons
Petroleum	1.00 gallon
Lead Acid Batteries	8.00 count
Non-Halogenated Hydrocarbons	450.00 gallons

Peavy Company
Peavy Burdick Shore Grain Elevator
2901 5th St. N.E.
Minneapolis, MN 55418
Phone:

Business Profile

SIC Codes: 5153 - Grain & Field Beans

Peavy Company owns and operates Peavy Burdick Shore Grain Elevator. The elevator consists of concrete silos, wood elevator bins, and an elevator workhouse with a total storage capacity of 2.55 million bushels. Average annual throughput is 45,000 to 375,000 tons. The elevator receives 5% of its grain by truck and 95% by railcar, the shipping numbers are the same. The Peavy Company is owned by the Con Agra Corporation.

Environmental Regulation

	Air Permit
Permit Number	847-94-G-1
Issue Date	May 20, 1994
Expiration Date	January 06, 1998
Regulated Pollutants & Parameters	(PM_{10}) < 0.100 g/dry STD ft^3 Opacity < 5-10%
Special Conditions	Throughput is limited to 375,000 tons/year. This area is a non-attainment area for CO_2
Regulated Fuels	Must use (LPG) or Natural gas
Reporting Requirements	As required by division manager. Annual Emission Inventory Report
Pollution Points	**seven:** (may include the following) Truck receiving pit(s). Truck and railcar loadout points. Enclosed elevator legs, conveyor belts and transfer points. Grain cleaners Grain dryers Fabric filter baghouses Cyclone dust collectors Feedmill equipment

Notes/Correspondence:
Air Permit:
April 26, 1993 -Inspection - No violations.
August 1, 1991 - Inspection - No violations.
March 12, 1990 - NOV - Failure to submit Emissions Inventory Report.

Production Engineering
3515 Marshall St. N.E.
Minneapolis, MN 55418-1004
Phone: 788-9123
Fax: 788-0472

Business Profile

SIC Codes: 3444 - Sheet Metal Work

Production Engineering performs precision sheet-metal work primarily for computer companies. The firms also does welding, assembly, and painting.
Michael Albers, President
Established in 1957
Employees: 77
Sales: $8 million

Hazardous Waste License

License Number	Size	Issue Date	Expiration Date
053-12840	Very Small Quantity Generator	March 3, 1995	December 31, 1995

Waste Minimization/Toxicity Reduction Efforts (1994):

- Minimize purchase of hazardous materials.
- Employee training to improve efficiency and minimize hazardous waste.
- Look for alternatives of hazardous waste used in production.

Hazardous Waste Production & Volumes

Hazardous Waste	Estimated Production
Unknown Oils	500.00 gallons
Unknown Miscellaneous	1,200.00 gallons
Chromium	500.00 gallons
Mercury	22.00 gallons
Non-Halogenated Hydrocarbons, Petroleum	50.00 gallons

S&S Welding
416 35th Ave.
Minneapolis, MN 55418
Phone: 788-2001
Fax: 788-1951

Business Profile

SIC Codes: 3599 - Industrial Machinery

S&S Welding is a welding job shop.
G.M. Mike Berge
Established in 1973
Employees: 25
Sales: $1-5 million
Parent Company: Williams Steel & Hardware
2nd St. N.E.
Minneapolis, MN
Phone: 588-9800

Hazardous Waste License

License Number	Size	Issue Date	Expiration Date
053-04436	Very Small Quantity Generator	March 1, 1995	December 31, 1995

Hazardous Waste Production & Volumes

Hazardous Waste	Relationship	Estimated Production
Lead Acid Batteries	In a non-hazardous carrier	10.00 count
Petroleum		55.00 gallons
Petroleum		165.00 gallons

Soo Line
Shoreham Yards
P.O. Box 530
2800 Central Ave.
Minneapolis, MN 55418

Canadian Pacific Rail Systems
Business Office
105 S. 5th St.
Minneapolis, MN 55402
Phone: 347- 8000

Business Profile

SIC Codes: 4011 - Railroads, Line-haul Operating

Description: CP Rail systems is made up of three RR Companies which operate as a single carrier. They have extensive administrative, freight, and maintenance facilities in the Twin Cities. As of 1984 Canadian Pacific Ltd. owns all outstanding common stock of the Soo Line. The Shoreham Shop is an intermodal facility and a locomotive heavy repair shop. Operations include sand blasting of rail cars, engine repair, and truck trailer transfers.
Edwin V. Dodge, Chief Executive Officer
Established in 1984 (Canadian Pacific)
Employees: 1,700 (total in MN)
Sales: 600 million (total in MN)

Hazardous Waste License

License Number	Size	Issue Date	Expiration Date
053-14405	Large Quantity Generator	December 29, 1994	December 31, 1995

Hazardous Waste Production & Volumes

Hazardous Waste	Estimated Production
Petroleum	79,170.00 gallons
Waste Paint Thinner	660.00 gallons
Mineral Spirits	55.00 gallons
Caustic Cleaner Vat Sludge	3,960.00 gallons
Caustic Cleaner - Oaklight 100	21,000.00 gallons
Lead Acid Batteries	2,000.00 count
1,1,1 Trichloroethane	55.00 gallons
Carburetor Cleaner	1,068.00 gallons
General Purpose Cleaner	1,500.00 gallons
Fluorescent Bulbs	112.00 count
Petroleum	1.00 gallons
Halogenated Hydrocarbons, Petroleum	no amount given
Batteries (Mercury)	100.00 gallons
Solvo Cleaner - Non-Hazardous	20,000.00 gallons
Lead	10.00 gallons
Printed Circuit Boards	55.00 gallons
Degreaser	60.00 gallons
Floor Sweepings From Paint Booth	20.00 lbs.
Batteries (Wet Alkali)	4,860.00 lbs.
Batteries (Cadmium/Nickel)	960.00 count
Batteries (Zinc/Carbon)	17,040.00 lbs.
Waste Oxidizer	400.00 lbs.

Environmental Regulation

	Air Permit	Sewer Permit
Permit Number	511A-91-OT-1	0420
Issue Date	November 8, 1991	October 1, 1994
Expiration Date	November 8, 1996	September 30, 1997
Regulated Pollutants & Parameters	Sulfur, SO_2 , NO_x P.M. 4 lbs./MMBTU Opacity < 20% Odor, Noise	pH, TSS, COD, Grease/Oil, and Lead
Regulated Fuels	Natural Gas, Distillate Fuel Oil	
Reporting Requirements		Industrial Waste Discharge Report 2 times per year.
Discharge Volume		37,646 gallons/day
Pollution Points	Steam heating plant with 3 boilers.	

Notes/Correspondence:

Air Permit:

November 16, 1994 -Inspection - No violations of MN Air Quality rules regarding visible emissions observed. *Some of the paint used for railcars contains **Xylene, which is on the Hazardous Air Pollutants List should be considered during the next permit application process.** Sandblasting should not occur in high wind due to close proximity to residential area.

April 26, 1991 - Complaint - Dirt was reported flying into the air. No action was taken.

July 10, 1990 - Complaint - Engines reported running 11 and 12 at a time, strong odor from diesel fumes present.

July 8, 1990 - Complaint - Strong odor from diesel engines reported. Referred to Minneapolis Air Pollution, 7-30-90.

Sewer Permit:

August 2, 1994 - NOV - Failing to complete and submit a self-monitoring report for January-June 1994.

July 25, 1991- NOV - Failing to meet local limitations for pH on March 13,1991.

March 2, 1990 - NOV - Failing to meet local limitations for pH and Lead on November 15-16, 1989.

Improvements:
October 18, 1994 - Canadian Pacific has reduced water usage by replacing the hose used to wash the floor with a more efficient high pressure spray wand. Three steam boilers have been converted from open loop systems to close loop systems. Locomotives are no longer fueled at this location. This allowed for the removal of the oil separator which was there as a pre-treatment precaution for sewer water discharge.

1994 Chemicals On-Site Data (311, 312, & 304)

ERC Site #271350246	Extremely Hazardous Substances	Chemicals & Other Hazardous Substances
Chemical Name	-	1)Oil, Lube 2)Oxygen, Refrigerated Liquid
CAS #	-	- 7782447
Maximum Daily Volumes (ranges)	-	10,000-99,999 lbs. 10,000-99,999 lbs.
Maximum Average Volumes (ranges)	-	10,000-99,999 lbs. 10,000-99,999 lbs.
Storage Container 1	-	Rail car at ambient pressure & temp. Above ground tank at greater than ambient pressure, cryogenic conditions.
Storage Container 2	-	- Above ground tank at greater than ambient pressure, cryogenic conditions.
Location	-	-
Remarks	-	Site plan 1989

Stone Container Corporation
50 37th Ave. N.E.
Minneapolis, MN 55421-3698
Phone: 789-2485
Fax: 782-4260

Business Profile

SIC Codes: 2675 - Die-cut Paper and Board

Stone Container manufactures corrugated boxes and shipping containers.
G.M. : Bill Kotrba
Established in 1955
Employees: 164
Sales: $35 million
Home office: Stone Container
150 N. Michigan Ave.
Chicago, IL 60601
(312) 346-6600

Hazardous Waste License

License Number	Size	Issue Date	Expiration Date
053-02835	Small Quantity Generator	January 1, 1995	December 31, 1995

Waste Minimization/Toxicity Reduction Efforts (1994):

- Changed to Safety Kleen 150
- Purchased pump/filter to filter and re-use lubricating oil.
- Did not strip urethane floors during 1993 and 1994, as a result no methylene chloride waste.

Hazardous Waste Production & Volumes

Hazardous Waste	Estimated Production
Petroleum	1,400.00 gallons
Non-Halogenated Hydrocarbons	360.00 gallons
Halogenated Hydrocarbons	220.00 gallons
Petroleum	148.00 lbs.
Batteries (mercury)	1,015.00 count

Environmental Regulation

	Air Permit
Permit Number	1974-92-OT-2
Issue Date	October 15, 1992
Expiration Date	October 15, 1997
Regulated Pollutants & Parameters	PM - Emission pts. 1&2 - o.4 lbs/MMBtu Emission pt. 3 - 0.1 gr/dscf Emission pt. 4 - 4.1 lbs/hr Opacity - 1&2 - 20%; except a max. of 60% permissible for 4 minutes in any 60 min. period and 40% for additional 4 min. in any 60 min. period. - 3&4 - 20 % SO_2 - 1&2 - 2 lbs/MMBtu
Reporting Requirements	Performance test for opacity and particulates on emission points 1-4 - Upon Division Managers request. O & M Plan - Within 60 days of permit issuance. Fugitive Emissions Plan - Control all fugitive ash, residue emissions in a manner to prevent PM.
Special Conditions	No federal standards of performance for new stationary sources applicable. Not a major source.
Enforcement Activity	See below
Pollution Control/Monitoring Equipment	Fabric Filter Baghouse - Pressure drop across each baghouse * Required to maintain both at a minimum of 1" of water and a 5" maximum.
Pollution/Emission Points	1) Boiler #1 2) Boiler #2 3) Starch Conveying System 4) Processing Equipment

Notes/Correspondence:

February 24, 1994 - Inspection - No violations. No complaints.

Zalk Steel & Supply
446 St. Anthony Parkway
Minneapolis, MN 55418-1141
Phone: 781-6801
Fax: 781-0062

Business Profile

SIC Codes: 3479 Metal Coating and Allied Services

Zalk Steel & Supply in the past had been a steel supply company. In 1988 Zalk's added to the supply company by construction of a hot-dip galvanizing, pickle and oiling facility as well.
Douglas Zalk, President
Established in 1955
Employees: 20
Sales: $ 4 million

Hazardous Waste License

License Number	Size	Issue Date	Expiration Date
053-17110	Large Quantity Generator	December 29, 1994	December 31, 1995

Waste Minimization/Toxicity Reduction Efforts (1994):

- HCL Acid pickle is shipped to Chicago before it becomes too contaminated so that it may be re-used in the production of zinc ammonium chloride.
- Ship zinc compounds that are contained in HCL acid are shipped to Two Harbors to be re-used in the production of zinc ammonium chloride.

Hazardous Waste Production & Volumes

Hazardous Waste	Estimated Production
Hydrochloric Acid	54,000.00 gallons
Fluorescent Bulbs	109.00 count
Lead Acid Batteries	75.00 lbs.
Petroleum	55.00 gallons
Unknown Metals	253,000.00 lbs.
Lead	400.00 gallons
Unknown Acids	2,500.00 lbs.
Ammonium Hydroxide	850.00 lbs.
Ammonium Hydroxide, Unknown Metals	55.00 gallons

1993 Toxic Release Inventory (TRI)

Chemical Name	Fugitive Air	Stack Air	Surface Water	Public Sewage	On-Site Land	Off-Site Transfers	Total Release & Transfers
Hydrochloric Acid	700 lbs.					1,400 lbs.	2,100 lbs.
Zinc Compounds		500 lbs.				1,400 lbs.	1,900 lbs.
Totals:							4,000 lbs.

Environmental Regulation

	Sewer Permit
Permit Number	0700
Issue Date	May 1, 1994
Expiration Date	April 30, 1997
Regulated Pollutants & Parameters	pH, TSS, COD, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Zinc
Special	
Reporting Requirements	Industrial Waste Discharge Report 1 time per year. Grab samples from each tank of discharge.
Enforcement Activity	see below
Pollution Points	Operation consists of 3 HCL tanks, Zinc-Ammonium Chloride tank, and a water rinse tank.

Notes/Correspondence:
Sewer Permit:
September 9, 1993 -Complaint - Large amount of vapors emanating from facility on August 31. Vapors were caused by a leak in one of the process tanks which was repaired.

February 3, 1992 -NOV - Failure to complete and submit a self-monitoring report.

July 15, 1986 -NOV - January - June, 1986 routine report: zinc concentrations exceeded categorical and local limitations.

August 5, 1985 -NOV - Failure to complete and submit self-monitoring report.

*** Zalk does not currently discharge any industrial wastewater, a determination will be made by MCWW on whether to keep them under permit.**

1994 Chemicals On-Site Data (311, 312, & 304)

ERC Site #271350078	Extremely Hazardous Substances	Chemicals & Other Hazardous Substances
Chemical Name	-	1) Hydrochloric Acid 2) Propane
CAS #	-	7647010 74986
Maximum Daily Volumes (ranges)	-	10,000-99,999 lbs. 10,000-99,999 lbs.
Maximum Average Volumes (ranges)	-	10,000-99,999 lbs. 1,000-9,999 lbs.
Storage Container 1	-	Tank inside building at ambient pressure and greater than ambient temp. Above ground tank at ambient temp. and greater than ambient pressure.
Storage Container 2	-	Carboy at ambient temp. and pressure. Cylinder at ambient temp. and greater than ambient pressure.
Location	-	West end of warehouse (galvanizing plant). Southwest area of property and west end of warehouse building, outside in propane storage shed.
Remarks	-	-

TRI Progress Reports:
In 1993 Zalk Steel and Supply had implemented the shipping of their Hydrochloric acid before it is too contaminated to their supplier so that it could be used in the production of zinc ammonium chloride. When the hydrochloric acid is shipped for this purpose it is not considered hazardous waste. The zinc compounds that are contained in the hydrochloric acid are also shipped off-site and used as a raw material in the production of zinc ammonium chloride.

As a result of this new activity, Zalk Steel & Supply have reduced the amount of hydrochloric acid released and/or transferred off-site from 38,000 lbs. in 1991 to 2,1000 lbs. in 1994. Zinc compounds were reduced from 19,400 lbs. in 1991 to 1,900 lbs. in 1994.

Quarterly Calendar for Permit Renewal

Date	Air Permit	Sewer Permit	Haz. Waste Lic. (1995)
January - March	Peavy Co. (1998) Soo Line (1996)	Fleming Co. (1994) Soo Line (1997)	
April - June		Custom Business (1997)	
July - September			
October - December	Stone Container (1997)	Mid-Continent (1997) Zalk (1997)	Custom Business Despatch Fleming Co. Heartwood Corp. Honeywell Mid-Continent Moorhead Mach. Production Eng. S&S Welding Soo Line Stone Container Zalk

Time Table for Individual Facility Permits

Facility Name	Air Permit	Sewer Permit	Hazardous Waste Lic.
Custom Business		May 31, 1997	December 31, 1995
Despatch Industries			December 31, 1995
Fleming Co.		March 31, 1994	December 31, 1995
Heartwood Corp.			December 31, 1995
Honeywell			December 31, 1995
Johnson Trucking			December 31, 1995
Mid-Continent		November 30, 1997	December 31, 1995
Moorhead Machine			December 31, 1995
Peavy Company	January 6, 1998		
Production Engineering			December 31, 1995
S&S Welding			December 31, 1995
Soo Line	November 8, 1996	September 30, 1997	December 31, 1995
Stone Container Corp.	October 15, 1997		December 31, 1995
Zalk's Steel & Supply		April 30, 1997	December 31, 1995

Appendix A

Definitions of Toxic Chemical Release Inventory (TRI) Media

Fugitive Air - Releases that are not directed through stacks, vents, pipes, ducts or any other confined air systems. Examples include leakage from valves, end lines, evaporative losses from surface impoundments and production lines, and releases from building; ventilation systems, doors, and windows.

Stack Air - Releases which are directed through stacks, vents, ducts, pipes, or other confined air systems, including storage tank emissions and air release from control /monitoring equipment.

Land - Releases to land on-site within the boundaries of the facility including landfills, land, surface impoundment, treatment/application farming, etc.

Water - Discharges to rivers, streams or other water bodies. Releases from on-site wastewater treatment systems and the contribution from stormwater runoff are included if applicable.

Sewer - Discharges to a wastewater treatment facility which is owned by a unit of government.

Shipped Off-site - Wastes sent outside the boundaries of a facility for treatment or disposal.

SOURCE: Emergency Response Commission

Appendix B

A Lost Lake Reconsidered

by Hans Olaf Pfannkuch

Editor's note: CURA was established, in part, to encourage the use of University faculty and students in solving community problems. Sometimes projects originate in the University and sometimes they originate with a community group or public agency. The study of Lake Sandy, which is detailed here, was proposed to CURA by the City of Minneapolis. A citizens group in northeast Minneapolis had been (and is) advocating the restoration of Lake Sandy and the city wanted to know if such a restoration was feasible. They turned to CURA for help. We located Professor Pfannkuch, an expert in the hydrology of lakes, and eventually a contract was drawn up between CURA and the Minneapolis Board of Parks and Recreation.

Pfannkuch concludes that restoring Lake Sandy is feasible, though more tests are needed to establish groundwater flow, and drainage patterns in the old lake basin.

The park board is concerned about the expense of the proposed lake restoration. Their budget has just been cut. And what about the golf course already occupying the old lake basin? Where do all the golfers go if their golf course is replaced by a lake?

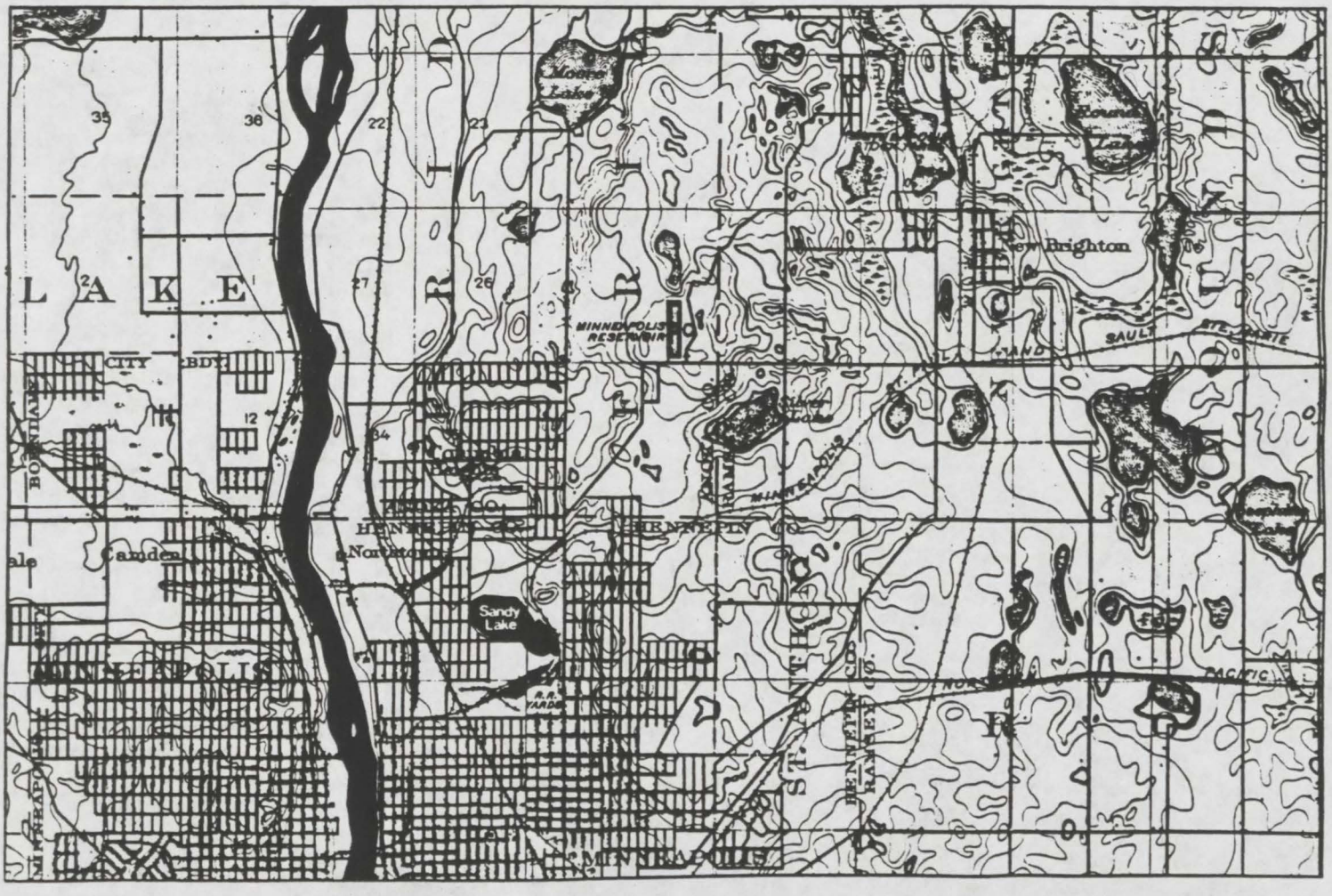
The economics and politics of the situation in Columbia Park may be more critical, in the long run, than the hydrology and geology of the proposed lake site. Whether or not this lost lake will be restored is up to the community and the various public agencies involved to decide. What the University is able to offer, through Pfannkuch's study, is some expert knowledge as to the feasibility of the project and, if a second phase of the feasibility study is carried out as recommended, an idea of what the cost of restoring this lake would be and how it could be done.

For readers who are interested in more detail about the Lake Sandy project, a copy of Pfannkuch's complete study is available in the CURA library. Phone Peggy Wolfe (625-1551) to arrange for a time to see it.

At the turn of this century a small lake, Lake Sandy, was situated in Columbia Park in northeast Minneapolis. Exact information about the lake's parameters, such as depth and volume, is unavailable for the time of its existence. Lake Sandy ceased to exist in the early part of the century, certainly by 1919, for a number of not-well-documented reasons. Subsequently the area of the former lake has been a wetland, off and on, and more recently it has been graded, drained and maintained as part of a municipal golf course.

Ever since the demise of Lake Sandy, deliberation about its restoration has been strong. In the past few years the "Lake Sandy Restoration Committee" and the Northeast Planning Council with various citizens advisory committees have been successful in regenerating interest and in initiating feasibility studies to rehabilitate the lake.

Lake Sandy as it appeared on a U.S. Geological Survey Map (surveyed in 1899 and published in 1916)



Could Lake Sandy be restored? This study investigates the hydrologic feasibility of reconstituting the lake in what is left of the old lake basin. It does not address the limnologic or economic feasibility of a newly restored lake.

Disappearance of the Lake

Several theories have been advanced about the drying up of Lake Sandy. These include drainage, change and diversion of surface runoff due to urbanization, lake bed destruction, and infilling.

A small collection of documents pertaining to Columbia Park and Sandy Lake has been compiled by the Minneapolis Board of Parks and Recreation.* The impression one gets from these excerpts is that park officials in the late nineteenth century were mainly interested in draining the lake and installing athletic fields or enlarging the golf course, which was considered more beneficial than a shallow lake. Soon after acquisition of Columbia Park, drain tiles were laid (in 1893) and connections to existing sewer systems were sought to accelerate drainage. This is partly documented by purchase orders for drain tile and its emplacement (1893-94) and different attempts to connect the park to the existing or a new sewer line (the 31st Street sewer).

As early as 1914-15 problems of athletic field use are connected with drainage of "the meadow" (no lake then). In 1918 the park drainage system was connected with the Soo Line drainage system and the meadow was considered dry enough for athletic activities. Not until 1925 are problems of wetness mentioned again in the park board's annual reports. Then, the problem of surface water disposal reappears.

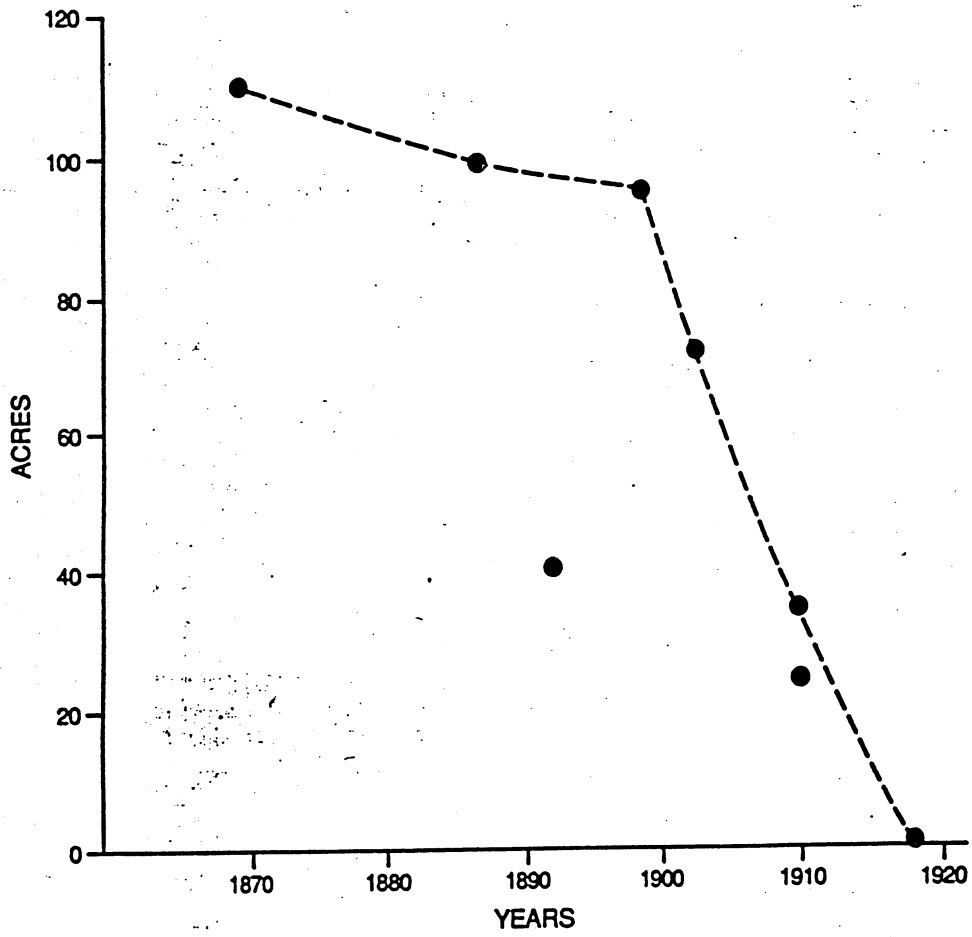
From 1928 on, citizens requested the regeneration of Lake Sandy or the installation of swimming facilities. The meadow was plowed and seeded in 1937 and fairways installed in 1940.

Perusal of old maps or plates showing Sandy Lake has resulted in Figure 1. The size of the lake as recorded in eight documents is plotted by year. The oldest document is a map by the Surveyor General's Office in which an unnamed lake is situated between the east half of section 2 and the west half of section 1 (T29, R24). It is assumed that it depicts Sandy Lake but is somewhat inaccurate with respect to its location. Later maps correctly show it entirely located in section 2. One document (1892) seems to diverge from the rest. Measurements from reliable topographic surveys around this time contradict the forty acres reported by Wirth and point to the existence of a much larger lake area during this period. If there had been a problem of distinguishing between marshy areas and open lake this would surely have been indicated, at least on the U.S. Geological Survey's topographic map of 1899.

The lake area seems to have declined slowly between 1870 and 1900, about five acres per decade. This could be due to changes in the natural runoff system supporting the lake as urbanization progressed. Such changes indicate that the lake in its quasi-natural state was dependent on surface runoff. The second portion of the graph, 1900 to 1920, marks a much more rapid decline in lake area, about forty-five acres per decade. This may coincide with the intensified efforts to artifically drain the lake and surrounding area.

No documentation that the lake level had been filled in by the dredgings of Lake of the Isles could be found. Some filling obviously was carried out at the southeastern end of the lake to increase the switch yard of the Soo Railroad Line. Other filling occurred during the construction of St. Anthony Parkway, the construction of the golf course, and in additional, small unspecified locations in the park. The latter concerned about 2,000 cubic yards at most, a tiny fraction of the entire lake volume. The main reason for the disappearance of the lake must have been, therefore, drainage and modification of surface runoff patterns.

Figure 1. SIZE OF LAKE SANDY AS RECORDED AT DIFFERENT TIMES



Sources:

1870	Map. Surveyor General's Office Unnamed Lake (Sec. 2 and 1)	110 acres
1887	Minneapolis (Plat Sec. 2, T29, R24)	99 acres
1892	Quote from Theodore Wirth	40 acres
1899	USGS 15' Topo Map (Surveyed)	95 acres
1903	Minneapolis [James E. Eagan]	72 acres
1910	Comparative Area Diagram	34 acres
1910	28th Annual Report (Minneapolis Park Board)	24 acres
1918	36th Annual Report (Minneapolis Park Board)	Dry

Is Restoration Feasible?

Prospects for restoration depend on a number of factors. The geologic situation, the configurations of the earth and the kind of materials in the earth, determines how suit-

*"Columbia/Sandy Lake," not dated, 45 pages.

able a site is for a lake. The hydrological situation, how much water is available under local climatic conditions, determines whether or not a lake will be created and remain as a lake. And morphometric considerations, the lake's surface area, depth, and volume, determine how the lake will behave from year to year in relation to its environment.

• The Geologic Situation

Bedrock and looser, surficial deposits form the container for lake basins. The hydrological characteristics of these materials determine the stability of a lake.

Bedrock geologic maps of the Lake Sandy area indicate a buried bedrock valley similar to that undergirding the Cedar-Isles-Calhoun-Harriet lake system. Surficial deposits are basically glacial drift to a depth of 100 to 200 feet. They consist of sandy till, sandy materials, clay, and organics. The geology of Columbia Park favors the creation of lake and wetlands.

Groundwater seepage is most probably into the Lake Sandy basin. Early reports and oral records speak of springs in the lake basin. It is, however, very difficult to judge the accuracy of those accounts. A more definite assessment of groundwater flow needs to be made. To do this, test wells would need to be drilled to the water table. Information about inseepage and outseepage would then be available to replace the assumptions made in this report.

• The Hydrologic Situation

Whether a depression in the earth, even with a low permeability bottom, will actually become and remain a lake depends largely on climatic conditions and the net water balance. The elements of the hydrologic cycle which constitute this balance are precipitation, evapotranspiration, and runoff.

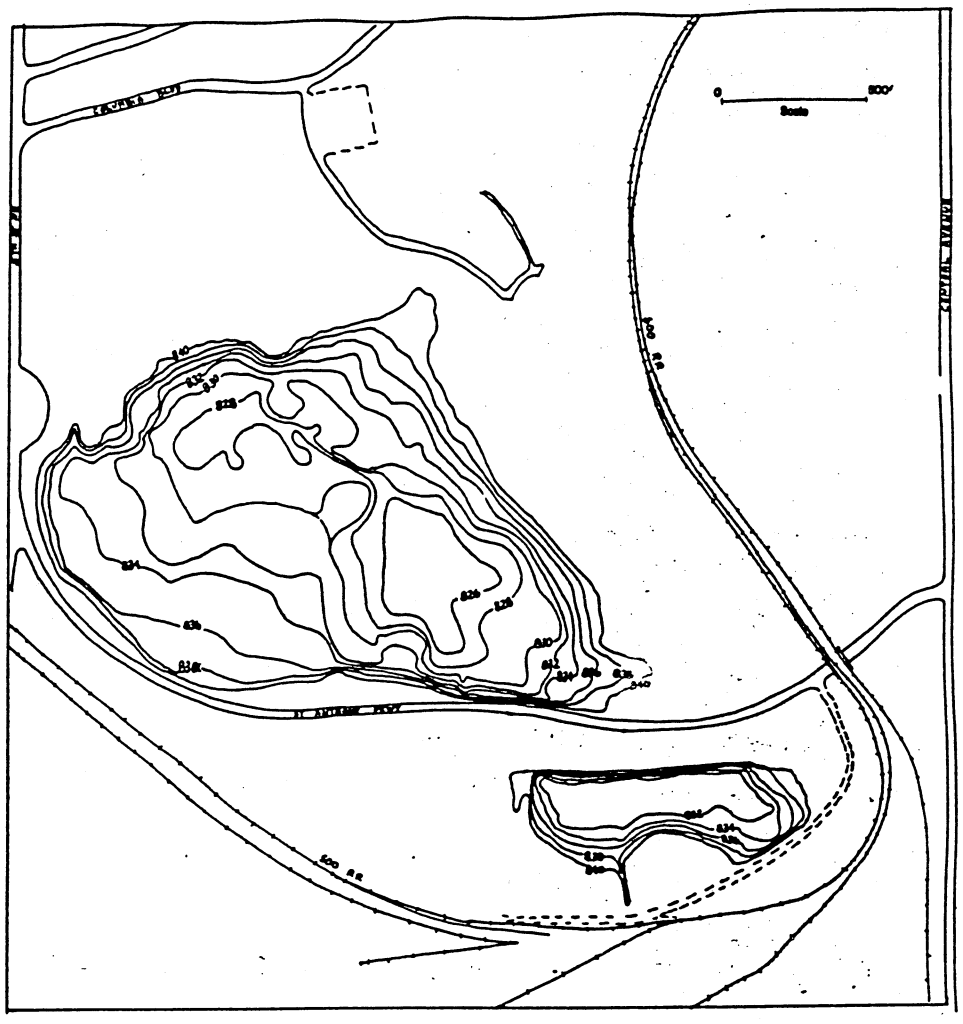
Precipitation data recorded at the Minneapolis-St. Paul airport were analyzed. The normal rainfall, over a thirty-year period, is approximately 27 inches. Rainfall can vary significantly from location to location. This report was based on the assumption that the situation in Columbia Park would be similar to that at the airport. A series of measurements at the Lake Sandy site is recommended.

Evapotranspiration is the transformation of water into vapor. It causes a direct loss of water from lakes. Evaporation takes place directly from open water surfaces whereas transpiration is mediated by plants. Both however, affect lake levels and are dependent on climatic conditions. Using mean monthly temperatures, an annual heat index, latitude, and available sunshine hours, evapotranspiration can be estimated. Over a thirty-year period annual evapotranspiration is about 25.3 inches in this region.

Precipitation and evapotranspiration are, therefore, more or less balanced in the Lake Sandy area. For different years, however, there would be moisture deficits and surpluses. The thirty-year norms are a good basis for long-term planning.

Runoff is the portion of precipitation that is available for surface runoff and collection or for subsurface movement of water. The total amount of runoff generated from a watershed depends on the amount of precipitation, the area of the watershed, and other parameters such as evapotranspiration. A map of contributing watershed areas in Columbia Park was prepared, but the situation is complex because much of the runoff goes into storm sewers. To obtain information about runoff and the efficiency of the artificial drainage system a series of controlled seepage experiments needs to be performed.

Figure 2. TOPOGRAPHIC CONTOURS OF THE OLD LAKE BASIN



• Morphometric Considerations

Besides considering a new lake in its general hydrogeologic environment, it is important to establish lake morphometric characteristics that will give some indication about the lake's hydrology and expected behavior under different climatic conditions. These will also influence the limnologic behavior of the lake system.

Lake surface area, depth, and volume are the fundamental parameters. Figure 2 shows the topographic contour lines of the old lake basin. The construction of St. Anthony Parkway has split the basin in two. Assuming that the basin can be filled, each one of these contours would indicate a lake level stage with an associated lake surface area. The cumulative lake volume was calculated for the basin north of St. Anthony Parkway and for the basin south of it. Mean lake depth would be eight feet in the north basin and six feet in the south basin, if they were filled to the 840 foot contour line. Any higher filling would cause flooding and damage to the parkway. Both basins are relatively shallow, approximately the same mean depth as Lake of the Isles.

Calculations were made of the ease or difficulty of keeping the lake level roughly constant. These were based on the thirty-years normal climatic conditions and on specific dry and wet years. Under the assumed conditions of groundwater seepage, the small lake basin south of St. Anthony Parkway could easily be filled and maintained with runoff from its own watershed and collected runoff from the golf course which is currently drained and pumped into the 31st Street sewer line on a regular basis. This would produce a small lake of roughly six acres.*

*Based on filling the lake to the 838 foot contour line.

The larger basin, north of the parkway, would also sustain a lake once the lake basin was filled. Here the lake would be relatively shallow, its average depth about 6.6 feet, and its area roughly forty acres.* Further investigation is needed to determine the actual groundwater flow conditions and the degree of artificial drainage in the old lake bed. Data from such a study would clarify whether the lake level would need to be maintained by the addition of small amounts of water over time or by the subtraction of small amounts of water. Water could be added from the Prairie du Chien-Jordan aquifer which could be tapped with a well, or surface water could be pumped off if larger pumping equipment were used than is now available in the park.

Conclusions

Is it physically and hydrologically possible to restore Lake Sandy? Yes. But this answer is based partly on the assumptions about natural conditions. A second phase of the lake restoration study is needed to investigate the actual groundwater flow conditions and the degree of artificial drainage in the old lake bed. During this phase the economics of the project need to be examined in a more detailed fashion. Besides the physical, hydrologic, and limnologic feasibility, examination of sociological, recreational, and political tradeoffs must be carried out by appropriate government agencies. And the cost of the project must be weighed against the benefits.

Hans Olaf Pfannkuch is a professor of geology and geophysics, specializing in groundwater geology and hydrology. His main research interests are studying groundwater pollution problems in shallow aquifers, especially those created by oil and hydrocarbon spills, and the detailed analysis of lake watershed hydrologic balances with emphasis on groundwater-lake interaction. Pfannkuch and his students have worked with the Minneapolis Park Board on the Minneapolis chain of lakes, with the city of Maple Grove on the feasibility of maintaining lakes in gravel mining areas, and on a long-term cooperative study with the U.S. Geological Survey on an experimental lake in central Minnesota.

GLOSSARY

CERCLIS - Comprehensive Environmental Response, Compensation, & Liability Information System. A federal listing by the EPA which identifies contaminated sites and superfund sites.
COD - Chemical Oxygen Demand is the amount of oxygen dissolved in water.
Cryogenic - The science of low teperature phenomena, used to obtain very low temperatures
EHS - Extremely Hazardous Substance, This is a listing of chemicals that are defined as extremely hazardous by The Occupational Health and Safety Act (OSHA). There are currently over 360 chemicals on the list. The list is updated annually.
EPA - Environmental Protection Agency. The Federal agency which is charged with administering a wide range of environmental laws and regulations.
EPCRA - Emergency Planning and Community Right-to-Know Act. This law was intended to improve emergency planning techniques for chemical spills and to inform citizens about the chemical hazards in their communities.
ERC - Emergency Response Commission. this agency is in charge of administering the EPCRA, this includes compiling chemicals on-site data accidental releases and TRI reporters.
HRS - Hazardous Ranking System. A system devised to rank the importance of PLP sites. It ranges from 1 to 65 with one being most important and 65 least.
MCWS - Metropolitan Council Wastewater Services. The agency that is in charge of administering municipal and industrial sewer permits.
MDA - Minnesota Department of Agriculture
MMBtu - British Thermal Units, a measurement of temperature.
MPCA - Minnesota Pollution Control Agency. The agency that enforces a wide range of environmental regulations, such as air permits, water permits, pollution progress, petrofund and superfund sites.
NOV - Notice of Violation
Opacity - A measure of air pollution that measures the lightness and darkness of stack emissions.
OSHA - Occupational Safety & Health Act
Petrofund - Petroleum Tank Compensation Fund. A fund that encourages landowners to clean up contaminated soil , surface water, and groundwater that was caused by underground or above ground petroleum tanks.
pH - The level of acidity or alkalinity of a substance. Measures on a scale of 1-14 with 1 being most acidic and 14 being most alkaline (basic) and 7 neutral.
PLP - Permanent List of Priorities; a state list of contaminated sites ranked by importance.
PM - Particulate matter is a measure of air pollution. Extremely small fragments of materials which can be carried by the wind.
PPM - Parts per million. This is equal to roughly one penny in 10,000 dollars, or one inch in 16 miles.

Appendix D

RCRA - Resource Conservation and Recovery Act. The law that regulates hazardous and non-hazardous waste production.
SARA - Superfund Amendments and Reauthorization Act (1986)
SIC Codes - A number assigned to industries which specifies their business type or manufacturing process.
Superfund - These are sites that have been contaminated due to a past or present manufacturing process. This federal program serves as a fund that requires landowners to clean up the site with compensation available. There are over 350 chemicals that are recognized for site reclamation.
TPPA - Minnesota Toxic Pollution Prevention Act (1990). This law requires industries reporting TRI or chemicals on-site to submit pollution prevention plans every 2 years and progress reports annually.
TRI - Toxic Chemical Release Inventory.
TSS - Total Suspended Solids. The amount t of solids suspended in a liquid substance per volume, usually water.
VOC - Volatile Organic Chemical

Appendix D

Chemical Glossary

Ammonium Hydroxide - A weak basic compound that forms when ammonia dissolves in water.
Cadmium - A naturally occurring element. It is most often found in combination with the elements oxygen, chlorine, and sulfur. It is used mostly in metal plating, batteries, and plastic. Can cause a number of adverse health effects.
Chromium - A naturally occurring element. Found in soil and volcanic dust/gases. It is used in making steel and other alloys. An essential nutrient that helps maintain normal metabolism. High-level exposure can result in adverse health affects.
CO_2 - Carbon Dioxide; Formed in respiration and from decaying organic matter, and does not support combustion.
Cyanide - A man-made and a naturally occurring element. The single largest source of cyanide in air is from vehicle exhaust. High-level exposure may harm central nervous system, respiratory system, and can also lead to coma or death.
Ethyl Benzene - Occurs naturally in coal tar and petroleum, also found in paint, ink, and insecticides. High-level exposure may affect movement and balance. No studies have reported fatalities.
Ethylene Trichloride - A man-made chemical that does not occur naturally. It is mainly used as a cleaning solvent. It is found at many superfund sites. Low-level exposure can cause dizziness, headaches, and slowed reactions.
HCL - Hydrochloric Acid
Mercury - A naturally occurring element. Produced by mines and refineries, it can be found at many superfund sites. Long-term exposure can damage brains, kidneys, and developing fetuses.
Methylene Chloride - Organic solvent used in industry as a paint stripper. Also a component in pesticides and photography. Can affect the central nervous system at levels above 500ppm.
NaOH - Sodium Hydroxide (Table Salt)
Nickel - A naturally occurring metal. It is used in making various steels and alloys, and in electroplating. The most common effects from nickel exposure are skin irritations.
NOx - Nitrogen Oxides; A number of oxides produced by combustion. They are considered atmospheric pollutants.
Pentachlorophenol (PCP) - Is not a naturally occurring chemical. It is most often found at superfund sites and releases from factories that treat wood products. It was at one time used as a universal pesticide and is therefore considered an agricultural chemical. High-level exposure may increase the risk of cancer.
Polynuclear Aromatics - It is known as creosote. It is commonly found with PCP's at superfund sites.
Potassium Hydroxide - Strong alkaline caustic liquid used in making soap and as a reagent.
SO_2 - Sulfur Dioxide; A heavy toxic gas. It is used in making sulfuric acid, as a preservative, and a refrigerant. A major pollutant in industrial areas.

Appendix E

Toluene - It occurs naturally in crude oil and is produced from petroleum refining. It is used in the manufacturing of paints, lacquers, adhesives, and some printing processes. Does not remain in the environment, it usually readily breaks down in soil and evaporators from water. The most common effects from Toluene on human health is the harmful effects on the nervous system.

Xylene - Primarily a man-made chemical. It is often found in solvents, thinners, paints, and petroleum products. If leaked to soil, surface water, or groundwater it can remain for 6 months or more before it is broken down. Short-term high-level exposure can cause irritation of skin, eyes, nose, and lungs. Short-term very high-level exposure can be fatal.

Zinc - A naturally occurring metal that is present in all foods, it is an essential element. It is most commonly used in industry as a protective coating for other metals. Large doses or exposures can be harmful.

Appendix E

AGENCIES

- **Citizens for a Better Environment**
  3255 Hennepin Ave. S., #150, Minneapolis, MN 55408
  Phone: 824-8367
  - Good Neighborhood Agreement Information
  - Community Assistance

- **Hennepin County Department of Environmental Management**
  417 N. 5th St., Minneapolis, MN 55401
  Phone: 348-4919.
  - Hazardous Waste Licenses

- **Minneapolis Environmental Section**, Inspections Division, Department of Regulatory Services
  250 S. 4th St., Minneapolis, MN 55415
  Phone: 673-5897 Fax: 673-5819
  - Contaminated Sites

- **Minnesota Department of Natural Resources**
  500 Lafayette Rd., St. Paul, MN 55155
  Phone: 296-6157

- **Metropolitan Council Wastewater Services**
  Mears Park Center, 230 E. 5th St., St. Paul, MN 55101
  Phone: 222-8423
  - Industrial Sewer Permits and regulations

- **Minnesota Pollution Control Agency (MPCA)**
  520 Lafayette Rd., St. Paul, MN 55155
  Phone: 296-6300
  - Air Quality Division
  - Hazardous Waste Division
  - Petrofund Division
  - Water use permits
  - Property Transfer Section
  - Superfund Division
  - Environmental Analysis

- **Emergency Response Commission**
  State Capitol, Rm. B5, 75 Constitution Ave., St. Paul, MN 55155
  Phone: 297-7372
  - TRI reporters
  - Chemicals On-Site (304,311,312 Data)
  - Emergency Response Plans

Appendix F

Agencies (continued)

- **Minnesota Department of Agriculture**
  90 W. Plato Blvd., St. Paul, MN 55155
  Phone: 297-2200
  - Superfund Site Division

- **Minnesota Office of Environmental Assistance**
  520 Lafayette Rd., St. Paul, MN 55155
  Phone: 296-3417
  - Community Assistance Programs

- **Minneapolis Public Works**
  309 2nd Ave. S., Minneapolis, MN 55401
  Phone: 673-5750
  - Maps: Neighborhood, Parks, Aerial Photos

- **Minnesota Technical Assistance Program**
  1313 5th St. SE, #207, Minneapolis, MN 55414
  Phone: 627-4646
  - Industry Pollution Prevention
  - Neighborhood Business Directory

- **Minnesota OSHA Division**
  443 Lafayette Rd., St. Paul, MN 55155-4307
  Phone: 296-2116
  - Extremely Hazardous Waste Listing

- **Minneapolis Parks and Recreation**
  400 S. 4th St., Minneapolis, MN 55415
  Phone: 661-5750

Appendix F

Resources

Brown, Jennifer. 1994. Marcy-Holmes Neighborhood Environmental Profile.

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